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REPORT ON THE INTER-REGIONAL STUDY TOUR ON MANPOWER ASSESSMENT AND PLANNING IN THE UNION OF SOVIET SOCIALIST REPUBLICS, 8 SEPTEMBER - 5 OCTOBER 1963.

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A MONTH-LONG STUDY TOUR PROVIDED 23 OFFICIALS OF 17 DEVELOPING COUNTRIES WITH AN OPPORTUNITY TO STUDY THE COMPREHENSIVE SYSTEM OF MANPOWER PLANNING AND UTILIZATION EMPLOYED IN THE UNION OF SOVIET SOCIALIST REPUBLICS (USSR) AND TO EXAMINE BASIC PRINCIPLES AND TECHNIQUES WHICH, WITH SUITABLE ADAPTATION, MIGHT HAVE APPLICABILITY TO SIMILAR PROBLEMS ELSEWHERE. THIS REPORT PROVIDES A SYNTHESIS OF THE USSR MANPOWER ASSESSMENT AND PLANNING INFORMATION AS IT WAS PRESENTED IN TECHNICAL PAPERS, LECTURES, DISCUSSIONS, AND FIELD VISITS. PART ONE DESCRIBES THE MAIN FEATURES OF MANPOWER PLANNING IN THE USSR INCLUDING THE UNDERLAYING ECONOMIC AND SOCIAL POLICIES, THE ROLE OF LABOR LAW, ADMINISTRATIVE ORGANIZATION, AND THE PLACE OF MANPOWER PLANNING IN THE GENERAL PLANNING PROCESS. PART TWO IS DEVOTED TO A DETAILED REPORT OF METHODS AND PROCEDURES USED IN MANPOWER ASSESSMENT, INCLUDING THE STATISTICAL SYSTEM, THE USE OF RECORDS OF MANPOWER RESOURCES AND REQUIREMENTS, THE METHODS OF MEETING THE REQUIREMENTS THROUGH EDUCATION AND TRAINING, THE DISTRIBUTION OF MANPOWER, AND EMPLOYMENT PLACEMENT. PART THREE PRESENTS THE MAIN CONCLUSIONS OF THE PARTICIPANTS REGARDING PRINCIPLES ESSENTIAL TO SOUND MANPOWER ASSESSMENT AND UTILIZATION. EIGHT APPENDIXES CONTAINS A LIST OF TOUR PARTICIPANTS, THE TECHNICAL PROGRAM, AND ADDITIONAL USSR INFORMATION. (HC)

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INTERNATIONAL LABOUR OFFICE
Expanded Programme of Technical Assistance

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8 September - 5 October 1963

GENEVA
1964

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Introduction

At the invitation of the Government of the Union of Soviet Socialist Republics the International Labour Office carried out under the Expanded Programme of Technical Assistance of the United Nations an Inter-Regional Study Tour on Manpower Assessment and Planning in the U.S.S.R. from 8 September to 5 October 1963. Participating in the study tour were 23 officials from 17 developing countries: Afghanistan, Bolivia, British Guiana, Burma, Ceylon, Cuba, Ethiopia, Ghana, India, Indonesia, Iran, Japan, Mexico, Nigeria, Sudan, Tanganyika and the United Arab Republic. Names of the individual participants are given in Appendix I.

The purpose of the study tour, which was the first of its kind on this subject in the U.S.S.R., was to provide officials of developing countries with an opportunity to study the comprehensive system of manpower planning and utilisation employed in the U.S.S.R. with a view to examining basic principles and techniques which with suitable adaptation might have applicability to similar problems elsewhere.

The project was sponsored by the State Labour and Wages Committee, the Council of Ministers of the U.S.S.R., under the chairmanship of Mr. A.P. Volkov; the Director and Co-Director of the study tour were Mr. Hugh Davenport, former Director of the Employment Service, Government of India and Dr. N.I. Shishkin, Head of Labour Resources Department, Labour Research Institute of the U.S.S.R., respectively. Mr. V. Semenov, Senior Economist of the State Labour and Wages Committee of the U.S.S.R. and Miss A. Pettijohn of the staff of the I.L.O. served as technical officials. Mr. A.F. Bordadin, Chief of the International Relations Section, State Labour and Wages Committee, actively participated throughout the organisation and conduct of the project.

The study tour consisted of three phases: in Moscow from 8-13 September and from 26-30 September; in Tashkent, Republic of Uzbek, from 15-25 September; and in the I.L.O. headquarters in Geneva from 1-5 October 1963. The period in Moscow was devoted to gaining a broad understanding of all aspects of manpower planning in the country as a whole, while in Tashkent the study concentrated on the operating programme within an individual Republic, including operations at the local level; the work in Geneva consisted of reviewing the problems of manpower assessment and planning in the participants' countries and in drawing conclusions regarding principles brought out in the study tour which have general applicability. The technical work while in the U.S.S.R. included formal lectures followed by question and answer periods, and a number of field visits to industrial and agricultural enterprises, educational and vocational and technical training institutions. In preparation for the study tour the Soviet authorities gave great care and attention to the preparation of text material including two general monographs and 16 technical papers prepared by eminent authorities in their respective fields. The technical agenda of the study tour appears in Appendix II. Lectures were given by:

N.I. Shishkin, Doctor of Geography, Head of Labour Resources Department of the Labour Research Institute.

V.B. Belkin, Master of Science, Head of Research Unit on Professional Training, State Committee for Vocational Training and Technical Education.

B.I. Braginskiy, Doctor of Economics: Chief of Section, Economic Science and Research Institute, State Planning Committee, U.S.S.R.

M.J. Chistijakov, Master of Economics, Chief, Education and Culture Department, State Planning Committee of the U.S.S.R.

B. Eidinov, Chief, Planning and Records Section, Central Office for Organised Recruitment and Resettlement, Under Council of Ministers of the Russia S.F.S.R.

A.E. Grigoryev, Doctor of Science, Chair of Labour Economics, Plekhanov Institute of National Economy, Moscow.

I.I. Iskakov, Principal Specialist, State Planning Committee of the Uzbek S.S.R.

J.I. Ismailjhodzhaev, Head of the Department of Organised Recruitment and Resettlement, Uzbek S.S.R.

L.A. Kostin, Master of Economics, Vice-Rector of the Moscow Advanced Correspondence School for Professional Training.

P.P. Litvjakov, Master of Economics, Head of the Economic Research Institute, State Planning Committee, U.S.S.R.

A.V. Pitakov, Master of Laws, Deputy Head Legal Department, State Committee for Labour and Wages, U.S.S.R.

M.Y. Sonin, Doctor of Economics, Senior Member, Institute of Economics, Academny of Sciences, U.S.S.R.

A.F. Ulyanova, Chief, Labour and Wages Department, Central Statistical Authority, U.S.S.R.

A.M. Vostrikova, Chief, Population and Health Statistics Division, Central Statistical Authority of the U.S.S.R.

Markus A. Yampolski, Chief Expert on Labour and Wages, Gosplan U.S.S.R.

V.D. Zaitsev, Master of Economic Science, Head of the Labour Section, Institute of Economics, Academy of Sciences of Uzbek S.S.R.

S.K. Zijadullaev, Master of Science, Correspondent Member of Academy of Construction and Architecture, Chairman of State Planning Committee, Uzbek S.S.R.

The purpose of the report which follows is to provide a synthesis of the information about manpower assessment and planning in the U.S.S.R. as it was presented to the participants in the study tour by means of the technical papers, lectures, discussions and field visits. Part One describes the main features of manpower planning in the U.S.S.R., covering the underlying policies, the role of labour law, administrative organisation for planning and the place of manpower planning within the general planning process. Part Two which makes up the major portion of the report is devoted to detailed methods and procedures used in manpower assessment, planning and utilisation including the statistical system, the use of records of manpower resources and requirements and methods of meeting manpower requirements through education and training, distribution of manpower, and placement in employment. Part Three presents the main conclusions of the participants of the study tour regarding principles essential to sound manpower assessment and utilisation. The report makes only slight reference to the historical development of manpower assessment and planning in the U.S.S.R., main emphasis being given to the programme as it is currently organised.

The I.L.O. is appreciative of the full co-operation afforded by all concerned with the study tour: the participants from the developing countries and their governments as well as the Soviet officials and the Government of the U.S.S.R. Particular mention is made of the work of the Soviet professional and technical staff and the interpreters who gave unstintingly of their time and effort not only to ensure that the project achieve a high technical standard but also to enable the participants and the I.L.O. staff to become acquainted with many important cultural aspects of life in the Soviet Union.

PART ONE - MAJOR FEATURES OF MANPOWER PLANNING IN THE U.S.S.R.

I. Economic and Social Development Policies Underlying Manpower Planning

In introducing the subject of manpower assessment and planning in the U.S.S.R. brief mention is made of the general framework within which these activities are accomplished. Listed below are some of the economic and social development policies, principles and objectives that serve as a guide or the approach to development planning.

National planning aims at ensuring full employment of the entire labour force in socially useful work and the rational distribution of the working population among the various economic sectors and regions of the country.

The best possible utilisation of human resources is postulated as the key to sound economic and social development. Manpower planning is completely integrated and co-ordinated within the entire development planning process, in its economic, fiscal and social aspects. Labour accounting takes into consideration the system of factors underlying economic planning.

Each planning target is based on assessment of the technical or economic aspects involved both with regard to requirements and to practical ways of meeting these requirements.

Main objectives of manpower planning are to obtain higher productivity and thereby raise the workers' living standards: to render equipment more technical while making labour less arduous; to concentrate effort on the most important tasks facing each industry and the economy in general; and to exert strict control over man-hours spent in auxiliary and subsidiary work.

Because labour productivity in domestic occupations and work on small private farm holdings is considered too low for the needs of society, women are increasingly encouraged to participate in work for public purposes.[1] Consequently a policy is pursued of developing family services such as nurseries, staggered-hour schools, boarding schools, restaurants and communal kitchens in order to provide incentives to women to enter employment as wage earners, salaried employees or collective farm workers.

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[1] Labour for public purposes covers wage earners and salaried employees of state co-operative undertakings and institutions, collective farm workers and students.

Improvement in techology is considered fundamental to economic development and is held as a policy aimed at reducing the expenditure of human labour, the use of animals and equipment while increasing the output of goods with a view to satisfying the constantly growing material and cultural needs of society and to reducing the working day.

The efficient utilisation of manpower resources and the technical progress which is essential to increasing productivity place increasing demands upon the level of workers' skills. Provision of practical general education, vocational and technical training takes account of these requirements for skilled manpower.

The focal point for increased productivity is the individual enterprise. To foster initiative at this level, the centralised direction of planning (which was necessary in the early years) has been supplemented by "democratic centralism". National development plans are drawn up on the basis of detailed plans drafted in the first instance at the level of individual enterprises (within the framework of broad guidelines) and subsequently co-ordinated at successively higher levels of administrative responsibility. An essential feature of this system is the policy of enabling the personnel of individual enterprises to participate actively in the discussion of draft plans.

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PART ONE - MAJOR FEATURES OF MANPOWER PLANNING IN THE U.S.S.R.

II. Labour Legislation Relative to Manpower Distribution and Utilisation

A. Significance of Labour Legislation

1. Labour legislation plays a large part in the training, distribution and utilisation of workers in the U.S.S.R. It defines the legal forms of manpower procurement, prescribes differential conditions (thus promoting appropriate distribution of manpower resources among the branches of the economy and economic regions), regulates the training and retraining of wage earners and salaried employees, contributes to the employment of workers according to their occupations and skill levels, and helps to promote personnel stability in undertakings.

2. It stimulates appropriate allocation of personnel by setting higher wage and salary rates in industries where work is hazardous or arduous, and in important industries or branches of the economy, and by establishing specially high rates and allowances for personnel employed in regions with servere climates.

3. It also contributes to workforce stability by providing for special benefits in case of long service (additional leave, seniority pay, etc.) and by requiring managements to take measures to improve the quality of work and production, conditions of work and the material and social services rendered to the personnel.

4. The Constitution of the U.S.S.R. states that the entire economic life of the U.S.S.R. shall be governed and directed by state economic planning. Therefore, the plans including manpower and training plans, have the force of law. Observance of the provisions of the labour laws is one of the most valuable instruments for the implementation of economic plans.

B. Rights and Obligations of Citizens

1. The Right to Employment and Obligation to Work

(a) Constitutional Basis

5. Regulation of manpower procurement in accordance with production requirements stems from the constitutional right of citizens to employment and their obligation to work. According to Article 118 of the Constitution of the U.S.S.R., citizens of the Union have the right to employment, i.e. the right to be provided with work, to enjoy security therein and to be paid according to its quantity and quality. The general obligation to work, as laid down in Article 12 of the Constitution, is an

expression of the principle that "he who does not work shall not eat" - which means that no person can transfer to another his due share of work for society. However, this is a general obligation, not related to any particular kind of labour, and any work in the interest of society is considered as fulfilment of it.

(b) Safeguards

6. The legislation provides a number of safeguards for the citizen's right to work. All citizens have equal access to employment in governmental, co-operative and publicly-owned undertakings, organisations and institutions. It is prohibited to refuse employment for such reasons as social origin, criminal record of the candidate or his parents or relatives, etc., unless restrictions are prescribed by special laws. The Criminal Codes of the Russian S.F.S.R.[1] and the other federated Republics make it a criminal offence to dismiss or to refuse to employ an expectant or nursing mother by reason of her condition. A rejected candidate for employment may complain to a higher level of management or to the public prosecutor's office.

7. Statutory provision is made for pre-engagement testing of personnel. The employment contract stipulates a probationary period, not exceeding six days for a manual worker, two weeks for a salaried employee and one month for personnel in the higher grades. If the employee's performance during that period indicates lack of aptitude for the particular work, the engagement is not confirmed (Labour Code of the R.S.F.S.R., (Articles 38 and 39)).

8. In the interests of efficient production, workers must be distributed with due regard for their occupations and skills; this is in the employee's interest also. According to Article 36 of the Labour Code of the R.S.F.S.R., the management may not require an employee to do work not appertaining to the job for which he was engaged.

9. When engaging personnel, the management must comply with labour laws and regulations and have regard to the objective qualities of candidates. In particular, persons under 16 years of age may not ordinarily be engaged; persons under 16 but over 15 years may be taken on in exceptional cases only, provided the trade union committee gives its consent.

10. A substantial guarantee of the right to work lies in the fact that a management can dismiss a worker only on the grounds specified in legislation, or otherwise only with the consent of the trade union committee. An employee, on the other hand, can terminate his employment contract (if it is not for a specified period) at any time provided he gives the management two weeks' notice.

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[1] Russian Soviet Federated Socialist Republic.

2. The Right to Education

11. Article 121 of the Constitution of the U.S.S.R. grants citizens the right to education. This right is implemented by the eight-year compulsory education system, extensive general (polytechnical) secondary education, vocational and technical education, specialised secondary and higher education (combined with practical training) and a constantly expanding network of evening and correspondence schools. All the above levels of education are free of charge and there is a system of state allowances for students; instruction in industry is also free.

C. Employment Contracts

1. General Aspects

12. As a rule, the basic legal formulation of a citizen's entry into employment is a free expression of his will - i.e. a contract. The contract of employment is the best means of applying the socialist principle "from each according to his ability, to each according to his work". It enables the citizen to choose employment suiting his tastes, interests, training and skill. However, the free choice of an occupation is made in the light of the public as well as of personal interest. The contract of employment defines the employee's duties and the conditions of work. Some of these conditions (date of inception, occupation, job and specific duties, provision of housing etc.) are stipulated by the parties, whereas others (numbers of daily hours, rest, rates of pay) are included in the contract on the basis of relevant laws or regulations.

13. Where employment is entered into on a basis of a contract, the manpower involved is distributed in accordance with certain targets, which have been fixed in respect of each undertaking or organisation by a superior authority, in accordance with the economic plan; the targets relate to productivity, numbers of employees, total wages, and average pay for each class of personnel. On the basis of the above, the manpower plan for the undertaking is drawn up. It specifies the number of wage earners in each occupation and grade and the number of engineers and technicians. The managerial and administrative personnel of the undertaking and the service personnel are determined in accordance with the undertaking's establishment (itself based on model establishments and structures) and in accordance with salary scales.

. . ..

2. Contracts Involved in Manpower Distribution

14. The chief legal forms taken by manpower reallocation are "organised recruitment" of wage earners, public appeals and transfer to other work.[1] All are based on the contract, the expression of the citizen's free will.

(a) Organised Recruitment

15. The following three kinds of relations arise in the process of organised recruitment:

1. relations between the agency which calculates the manpower reserves and the agency which plans the recruitment;
2. relations between the organs of the agency which plans the recruitment and the undertakings for which it is conducted;
3. labour law relations, based on contracts of employment, between the workers and the undertakings.

16. The work of organised recruitment is carried out by special departments for internal migration and organised recruitment of wage earners of the governments of the Federated Republics with corresponding organs at the level of the executive committees of the provincial or district councils of workers' deputies. The field work is done by area agents and inspectors of the above agencies. The functions include working out plans for the organised recruitment of wage earners and placing these before the Republic governments or provincial or district executives; effecting - on the basis of applications by national economic councils, ministries and other authorities - quarterly schedules of recruitment targets in the light of the needs of undertakings and construction sites and their readiness to take on the recruited workers; organisation of transport to the workplace and provision of services on the way; study of the manpower resources of towns and rural localities; information, replies to inquiries and mass explanatory work among the population; etc.

The above-mentioned special departments at the Republic and provincial or district level are responsible for organising the internal migration of members of the agricultural population, checking the economic aspects of their resettlement, steering skilled and professional workers into employment, and assisting in the distribution of young professional men and women leaving higher and specialised secondary educational institutions.

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[1] See Part Two, Chapter VII Employment Placement for description of organisation and procedures of manpower recruitment.

17. The agents of the provincial or district sections for organised recruitment conclude employment contracts with the recruited workers on behalf of the industrial or construction undertakings for which the recruitment is carried out. The section is required to recruit workers for undertakings in accordance with the plan, to arrange for their medical examination if necessary, to bring them to the new workplace, to make them a cash advance on behalf of the undertaking, to pay for the travel and other expenses of the workers and members of their families. The employment contract thus concluded gives rise to rights and obligations on the part of the undertaking, which is required to find the worker a job within 24 hours of his arrival, to provide him with accommodation in a furnished hostel, to arrange for transport thither from the station of arrival, etc.

18. The organised recruitment agencies check on the readiness of the undertaking to take over the workers, to provide suitable employment for them and to meet their housing and other social requirements. They can refuse to send workers to an undertaking which is not ready in any of these respects.

19. The contracts concluded with workers taken on under the organised recruitment scheme stipulate employment for not less than one year; usually the period is not less than two years; in the case of undertakings in the extreme north and areas placed on the same footing it is not less than three years.

20. The individual contracts of employment determine:

1. The conditions attaching to change of employment (payment of a transfer grant, a subsistence allowance during travel, travel costs for the worker and members of his family, and cost of transporting their baggage up to limits of 240 kg. for the worker and 80 kg. for each family member).

2. The rights and obligations of the worker. His rights are determined within the framework of current labour legislation (remuneration, leave entitlement, etc.). In return, the worker undertakes: to be at the place indicated to him for transport to the workplace at a specific time; to carry out honestly and conscientiously the work allotted to him; to have strict regard to labour discipline; to comply with the works rules and the instructions given by management; to improve his own skills and increase his productivity.

3. The obligations of the undertaking to provide the worker with appropriate living and working conditions (housing, meals, instruction in a given occupation, facilities for raising his level of skill, payment of cost of journey back to his former residence on conclusion of the contractual period, etc.).

(b) Reallocation of Manpower Through Public Appeal

21. Persons wishing to go and work in undertakings or on construction sites under the "public appeal" scheme are recruited by special city and district boards composed of representatives of Government, Party and Communist youth organs.

22. Although this scheme of manpower reallocation is conceived as a service to society, the Government nevertheless grants various benefits and advantages to persons responding to the appeals. Thus, undertakings and organisations must release from their employment, without hindrance, persons sent to other work under the public appeals scheme. Such persons receive a single non-repayable grant at the rate for a couple, the cost of moving to the new locality is refunded and their employment is considered to have been continuous for purposes of state social insurance benefit, pensions and rewards for long service; while learning a new occupation the worker receives - for not more than three months - wages on the scale and at the skill rate applying to the job for which he is being trained; expenses involved in the transport of the worker's family and their belongings are refunded if the worker sends for them within two years of his own departure. In order to assist young workers to resettle their families, loans of 200 roubles are made to be refunded within 18 months.

23. However, the worker's express desire to migrate under the public appeal scheme and his receipt of travel papers do not in themselves create an employment relationship. If he does not go to the workplace which has been allotted, the individual incurs a moral liability towards the public organisations which instructed him to do so; he is also required to repay the sums advanced (wholly or partly, according to the validity of his reason for not going to work).

24. The employment relationship is established on arrival at the new workplace. The manager of the undertaking or construction site is obliged to take the worker on and provide him with a job. Usually a contract of employment is concluded for an indeterminate duration but specifying the job and conditions of work. Acceptable working and living conditions must be provided for personnel taken on in this way, and if necessary practical training in the particular occupation must be arranged.

(c) Transfer in Employment

25. A temporary transfer to other work is permissible only in cases for which statutory provision is made (*force majeure*, urgency, temporary incapacity etc.). Permanent transfer to other work in the same undertaking or institution, or in another in the same locality, or in another locality is permissible only in the case of mutual consent - i.e. on a strictly voluntary basis. Transfer, either within the undertaking or between undertakings, is a contractual form of manpower reallocation, intended to promote the introduction of new techniques, to improve the organisation of the plant as regards labour or production, or to improve the management.

26. Management is bound to offer a redundant worker an alternative job in the same establishment, or in another under the same authority in the same region, if such a job is available. When a worker is transferred at the instance of the undertaking he is offered several forms of compensation or safeguards (maintenance of earnings for a specified period, a daily allowance, a cash grant, refund of removal costs, etc.). He also receives his wage or salary during the journey and the time required for resettlement, and a single cash grant. His employment is considered not to have been interrupted.

27. In any case, transfer to another permanent job cannot be operated without the consent of the employee. If the latter does not consent to be transferred to another undertaking, or to another locality if the undertaking is moved there, the contract of employment may be terminated by either party and the employee receives a separation payment.

(d) Fixed-Term Employment Contracts of Young Wage-Earners and Professional Workers

28. Plans for the training of highly skilled personnel at the various vocational schools and colleges are elaborated on the basis of the expected needs of the economy, the location of the undertakings concerned and the school-type training facilities. Persons graduating from vocational schools and colleges are required to work for two to four years in industrial or construction undertakings or in other services, according to the occupation learnt. Young professional workers who have graduated from higher educational institutions or specialised secondary schools must accept employment in the jobs allotted to them for a three-year period. Citizens voluntarily assume this obligation: when taking advantage of free entry into the vocational school or college they implicitly consent to the utilisation of their services after graduation in accordance with the instructions of the competent authority.

29. The provision of employment for young wage-earners and professional workers in accordance with state plans is one of the ways in which the citizen's right to work, proclaimed in Article 118 of the Constitution of the U.S.S.R., becomes effective. The appointment of young professional workers is made, not more than three months after graduation, by a special board which includes representatives of public associations. In this determination, the desires and interests of the persons concerned are taken into account: for instance, a husband and wife who graduate at the same time are appointed to jobs in the same city or district.

30. Together with his educational certificate, the professional worker is handed an instruction specifying the post to which he is directed and the date on which he is to take it up. On the basis of this document, when the future employee reports for duty at the undertaking or office, the management concludes with him a contract of employment for a specific period. Analogous fixed-term contracts are concluded with young wage-earners.

31. If the employee is being sent to employment at a place other than that at which he has previously resided, the cost of travel for himself and his family is refunded to him and he also receives a grant in cash and a subsistence allowance for the period of travel. Before starting work he receives a month's leave with pay at the rate of the study allowance.

32. The provisions of labour legislation are applied fully to such young professional workers and wage earners. Certain advantages are also allowed to them. In particular the management is required to provide professional workers with housing and to ensure satisfactory conditions as regards work and rest. Employment of young professional workers and wage-earners on work outside their particular occupations is prohibited. Senior officials in ministries, economic councils, provincial and district executives, undertakings and institutions are responsible for the correct utilisation of professional workers' services. As a rule, such workers cannot be dismissed by the management until completion of the period of service required of them in exchange for their education.

33. In case of failure to present himself at the workplace, or refusal to work without good reason, or release from the employment at his own desire, or dismissal for breach of labour discipline, the young professional worker is required to refund in full the sums he has received on account of the journey.

D. Training Contracts

1. Young Persons

34. Managements of industrial undertakings, construction projects, state farms and other units are required to take on for employment and training young persons sent to them by the executive committees of the city and district councils of workers' deputies. With this object, labour plans contain provision for the engagement and practical training of persons graduating from the secondary schools and other young persons up to a certain age.

35. The commonest form of training in industry is "individual and group training". On the one hand, the young worker acquires a mastery of his trade in the process of production under the individual guidance of a skilled craftsman. On the other, several trainees in a given occupation are brought together in a group or team for a theoretical and practical course: they may belong either to a production team or to a school team headed by an instructor.

36. The management of the undertaking concludes with each such trainee a special contract of employment, known as a training contract, which provides for the performance of certain work combined with training at the expense of the undertaking for a specified period, payment depending on the quantity and quality of the work done.

37. The training contract is one of the ways of implementing the citizen's right to work and to free training on the job. It stipulates that the young worker shall be trained in a specific occupation for a specific period and that when the training is completed the management shall be obliged to employ him in the undertaking in accordance with the occupation and skill which he has learnt.

38. Having completed his training in some occupation within the agreed period, the young worker is examined by the testing board. On the basis of the results he is certified as qualified in that occupation and a grade is allotted to him. The grade is determined by the management of the undertaking in agreement with the trade union committee.

39. There is a standard scheme for the payment of trainees, with differentials according to the kind of training and the form of remuneration. Thus during individual training a trainee on piece rates receives - in addition to pay for his effective useful output in accordance with current standards and methods of calculation - a time payment equal (during the first month of training) to 75 per cent. of the standard rate for a time worker in grade I; this payment is reduced to 60 per cent. of the said rate in the second month of training and to 40 per cent. in the third. The maximum period of training is six months.

2. Training Without Suspension of Employment

40. The chief method used to improve the skill of industrial workers is by various courses without suspending employment: courses on machine operation, courses for highly skilled workers, courses for master craftsmen, etc. The quota to attend these is determined by the undertaking in accordance with the training plan.

41. In the case of retraining or of training in an alternative occupation while remaining in industry, payment is made on a uniform basis. The worker receives 100 per cent. of his average earnings for the first month of training, 70 per cent. for the second month and 40 per cent. for the third: from the second month onward he also receives payment for his effective useful output in accordance with current standards and methods of calculation. The maximum duration of advanced or retraining courses in industry is three months.

42. Attendance at some courses is on a full-time basis (courses for retraining in exceptionally complex jobs, inter-plant schools and courses, etc.). In the majority of cases the personnel detached for attendance at schools or courses away from the place of residence retain their usual pay and are housed free of charge in hostels.

43. Wage-earners and salaried employees who study at evening or correspondence schools at higher or specialised secondary level receive a number of benefits and advantages. They have leave with pay for school examinations (10-40 days a year), for preparation of theses or similar work (2-4 months) and, for state examinations (30 days). Persons in their last year of study may have an additional month's leave to acquaint themselves with the work in their future occupation: this is without pay, but the worker receives a study allowance for its duration.

44. For ten months before the time at which the state examination or preparation of the thesis is to begin, every student receives a weekly day off duty with 50 per cent. of pay. Once a year he receives a grant equal to 50 per cent. of the cost of travel to the correspondence school and back so that he may do laboratory work, take examinations etc.

45. Managerial, engineering and technical personnel raise their skill levels without suspending employment by attending special courses (duration one year) at higher or specialised secondary educational institutions, or shorter upgrading courses (six months) at national economic councils, ministries, government departments, large industrial or construction undertakings and scientific or research institutions. Personnel who attend higher or specialised secondary educational institutions for the above purposes for not less than ten months receive special leave for ten calendar days, with salary at the time of the examination and presentation of thesis; those who have studied for upgrading by correspondence are entitled to payment of the cost of an annual journey to the correspondence school and back and free accommodation.

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III. Organisation for Manpower Planning: Administrative and Functional Relationships

An understanding of how the manpower planning process operates in the U.S.S.R. may be facilitated by a brief summary of those parts of the governmental structure which provide the principal sources of direction, co-ordination and evaluation of the programme. Appendix III is a schematic chart depicting some of the main administrative and functional relationships which involve manpower planning.

A. Principal Parts of the Administrative Network

The organisation of manpower planning is a co-ordinated administrative network which reaches from the Council of Ministers of the U.S.S.R. down to individual enterprises. In addition to the organs of government concerned with general administrative matters (i.e. councils of ministers at the union and republic levels and the executive committees of the councils of workers' deputies at the region, district and municipal levels) there are three main administrative lines dealing with manpower planning: the statistical authorities, the planning bodies per se, and the economic councils, respectively. Inter alia the State[1] Committee for Wages and Labour and the State Committee for Co-ordination of Scientific and Research Work are also concerned. These various authorities are discussed below.

B. Supreme National Economic Council of the U.S.S.R.

The Supreme National Economic Council of the U.S.S.R. has been set up under the Council of Ministers of the U.S.S.R. Reporting to it are: the State Planning Committee (GOSPLAN), the Council of National Economy (SOVNARKHOZ), and the State Committee for Construction (GOSSTROI). These three bodies also report to the Council of Ministers of the U.S.S.R.[2] The Supreme National Economic Council of the U.S.S.R. is the highest authority in charge of industry and construction and one of its major functions is the co-ordination of the work of GOSPLAN and GOSSTROI).

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[1] A "State" organisational unit is one which is located at the union level.

[2] The practice of reporting to two or more higher authorities is common throughout government. For example, a planning committee of a republic reports both to the Council of Ministers of the Republic and to the State Planning Committee; an individual enterprise reports functionally to the Municipal Statistical Department, the Municipal Planning Department and to the SOVNARKHNOZ of the economic region in which it is located.

C. State Planning Committee (GOSPLAN)

The general planning authority comprises the State Planning Committee of the U.S.S.R. (GOSPLAN), the Planning Committee of each Republic[1], and the Planning Department of each region, district and municipality. The State Planning Committee of the U.S.S.R. working in close co-operation with other state bodies, particularly SOVNARKHOZ and GOSTROI is responsible for drafting the integrated economic development plans for the Soviet Union as a whole on the basis of plans received from the Planning Committees of the Republics which in turn have their origin in plans drafted locally. In carrying out this responsibility GOSPLAN decides the main lines of economic development for the planning period in accordance with government instructions; prepares the schedule and methods for preparing the plans; co-ordinates plans of individual Republics; dovetails measures at the territorial and economic branch levels; supervises implementation of the plans in respect to the prompt entry into operation of the productive forces and the introduction of new forms of production and develops measures for the balanced development of the entire national economy. GOSPLAN combines both current and forward planning to provide continuity in the planning process.

Within the framework of GOSPLAN are ten committees which plan activities in the various branches of industry and provide guidance in technical progress and specialisation in production.

D. Regional Planning Committees and District and Municipal Planning Departments

The basic function of planning committees at the regional level and planning departments at the district and municipal levels is to ensure the steady development of the local economy through the maximum utilisation of internal reserves and local resources. Although their work is geared to national requirements, it relates principally to the local situation, namely, industries under local authorities which fall outside the field of national economic councils, local social and cultural construction (schools, hospitals, housing and communal facilities) and local agriculture.

E. State Committee for Vocational Training and Technical Education

Under the State Planning Committee (GOSPLAN) is the State Committee for Vocational Training and Technical Education to which in turn are linked subordinate administrative bodies for vocational training, and technical education at the republic, region, district and municipal levels. The main tasks of the State Committee for Vocational Training and Technical Education include the preparation and publication of curricula, syllabuses, the publication of textbooks and the production of visual aids. The Committee is concerned with questions of policy affecting the status and development of vocational training and technical education in the Soviet Union as a whole.

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[1] See Appendix IV. Note on the Organisation of the Planning Committee of the Republic of Uzbek.

F. Council of National Economy (SOVNARKHOZ)

Under the terms of approved economic plans, the Council of National Economy is responsible for ensuring the rational utilisation of material, manpower and financial resources; the promotion of productivity; and the discovery and use of available reserves. At present the Soviet Union is divided into 47 economic regions: in each region there is an economic council for the administration of industrial undertakings and projects. These economic councils plan the industrial activities of the regions concerned, direct the practical fulfilment of the plans and prepare and carry out plans for material and technical supplies. They have full powers in directing the undertakings subject to their authority and, within their field of competence, issue instructions which have binding force.

G. Statistical Administration

Statistical services are carried out by the Central Statistical Office which reports to the Council of Ministers of the U.S.S.R. and by its subordinate statistical bodies at the republic, region, district and municipal levels. Two subdivisions within the Central Statistical Office pertinent to manpower assessment and planning are the Labour and Wages Department and the Population and Health Statistics Division. The functions of the State Statistical Administration include the development and maintenance of statistical standards, methods and programmes. Through its subordinate bodies it is responsible for the collection and processing of the statistical data required for manpower planning.

H. State Committee for Labour and Wages

One of the bodies reporting directly to the Council of Ministers of the U.S.S.R. is the State Committee for Labour and Wages. The functions of this Committee include inter alia: recommendations to the Council of Ministers regarding wage rates and the qualifications required of workers (developed jointly with the trade unions); the organisation of systems of benefits and incentive payments; the development of systems for the establishment of technical norms; and the development of occupational composition patterns by type of enterprise and branch of economic activity. Attached to the State Committee for Labour and Wages is the Labour Research Institute which is responsible for the study of manpower utilisation and planning problems and for the coordination of manpower research work throughout the country.

I. Administration for Organised Recruitment and Resettlement of Workers (ORGNABOR)

Attached to the Council of Ministers of each Republic is the Administration for Organised Recruitment and Resettlement of Workers (ORGNABOR). There are local offices of ORGNABOR at the region, district and municipal levels. The functions of the central administration and local offices include not only the actual recruitment and resettlement of workers as the name implies but also the study of manpower resources and requirements and, in conjunction with the State Planning Committee, determination of areas of shortage and surpluses; the establishment of quarterly quotas for organised recruitment on the basis of annual plans; and the submission of draft plans for recruitment to the Council of Ministers of the Republic concerned for confirmation.

J. Organisation within Enterprises

The determination of manpower requirements in individual enterprises is facilitated by the fact that there are standard organisational patterns, developed according to size of establishment, and volume and nature of production. The standard categories of staff in industrial enterprises and an illustration of the standard organisational pattern in an establishment manufacturing agricultural implements having more than 5,000 workers are given in Part Two, Chapter III Planning the Strength and Composition of the Workforce in an Undertaking. Manpower planning is initiated in the individual enterprises following standard methods elaborated by the State Planning Committee (GOSPLAN) and the State Statistical Administration. Proposals coming from the enterprises are subsequently co-ordinated into plans for the industry, economic region and Republic. After their analysis and adjustment the over-all manpower plan is worked out by GOSPLAN and submitted to the Council of Ministers of the U.S.S.R.

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PART ONE - MAJOR FEATURES OF MANPOWER PLANNING IN THE U.S.S.R.

IV. Manpower Planning within the General Planning Process

A. Summary

1. Over-all economic and social development planning in the U.S.S.R. is the responsibility of the planning authorities which act as the machinery or the economic staff of the relevant executive organs of the State. The planning system embraces all levels of the national economy and culture and the plan is binding. Co-ordination of the work of the numerous bodies engaged in various aspects of planning is ensured by unified economic development policy and by application of standardised principles and methods in the drafting of plans.

2. The complicated process of manpower planning[1] is characterised by the following salient features:

- manpower plans form an integral part of general economic and social development plans and are drawn up in relation to them;
- planning activities start in the undertakings, lower-level building administrations, collective and state farms and in the territorial production authorities;
- planning at the level of the enterprise proceeds on the basis of broad guidelines for economic and social development and instructions provided by the Central Committee of the Communist Party and the Government;
- in contrast to basic planning directions of GOSPLAN, which are brief and broad, draft plans emanating from the enterprises are in great detail, having been worked out from systematically corrected and technically justified work standards and include estimates which carefully substantiate the plans;
- methods of implementing manpower plans form a part of the plans themselves; to ensure implementation there is a planning department in each enterprise;
- the essential technical instrument in developing plans is the series of balance sheets or tabulated records, produced at all stages of planning, covering the factors of material resources, finance and manpower, singly or in combination and in appropriate permutations;
- planning at the level of the enterprise entails the working out of organisational and technical measures in which there is the active, voluntary participation of the wage-earners themselves,

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[1] See also Manpower Planning in Eastern Europe, International Labour Review, Vol. LXXXVI, No. 2, August 1962.

- targets for labour productivity are a crucial factor in determining manpower requirements and manpower planning is closely related to such targets.

B. Principles and General Methods of Planning

3. The aim of achieving the greatest productive results with the least expenditure in the interests of society underlies the following general principles of planning:

- priority in the development of individual branches and forms of development: In both current and forward planning priority is given to the most advanced branches of economic activity that assist technical progress, i.e. the principle of fundamental or leading elements. Such branches are given priority with regard to capital investment, material resources, and manpower in order to ensure the highest possible rates of development;

- balanced economic development: The principles of priority in the development of individual branches is combined with that of harmonious and balanced development of the whole national economy according to sound proportions;

- concentration of capital investment: The two principles above are combined with that of concentrating capital investment for speedy completion of building projects in order to bring new industrial capacity, housing and similar facilities into operation;

- maximum utilisation of productive capacity: An important principle observed by each enterprise and building project is the fullest utilisation of its own internal resources;

- technical progress throughout the economy: Planners and economists pay constant attention to the need for regular improvement in technical equipment and its productivity in all branches of activity.

4. The foregoing principles followed in drafting plans are also of fundamental importance in the planning methods used. Broadly speaking two main methods are applied in drawing up plans and in supervising their implementation: (a) technical assessment of planning targets and (b) tabulated records.

5. Planning targets: State planning targets are based on intricate and comprehensive assessment of the technical and economic aspects involved with regard both to requirements and to ways of meeting them. For example:

- the output target for a particular item is decided in light of productive capacity, planned rates of utilisation of such capacity, calculation of transportation and deliveries of raw material, assessment of fuel and power, and assessment of labour productivity and of manpower requirements;

- the target figures relating to the volume and structure of retail turnover are based on the popular purchasing fund in the field of state and co-operative trade, the degree to which popular demand for consumer goods can be met and other related economic calculations.

- the target figures relating to training of skilled manpower are based on assessment of additional requirements with allowance for loss of manpower during the planning period and for the possibility of training in vocational and technical schools, in secondary schools or in the actual undertaking.

6. Tabulated records: The U.S.S.R. plans economic development as a unified process, combining all its phases and aspects: production, distribution, exchange, consumption and accumulation. Planning of this process requires the exact proportions to be established between means of production and manpower, between basic and circulating funds, between financial and material resources and between output of different forms of production, i.e. between related branches and forms of production. These proportions can be modified as desired by planning differentiated rates and levels of development. Rates and proportions are interdependent, and this relationship is laid down in the unified plan as regards both quantity and quality in an exact balance which must not be disturbed.

7. Strict observance of the principle of balance in economic development is one of the essential elements in planning and scientific methods of ensuring balanced economic development have evolved. In this, the system of balance sheets or tabulated planning plays a vital part, since it enables the proper proportion to be established between requirements and the growth of production, with simultaneous co-ordination of the various planning departments and indices. This method makes it possible to regulate branch, territorial and national economic proportions, providing for planning of such items as the volume of production, capital investment and production turnover.

8. The method of planning through tabulated records has been widely developed and such records are now produced at all stages of the planning process, by district planning commissions, by planning authorities of the Republics, and by the central planning authorities in drafting both current and forward plans. Tabulated records may be divided into four general categories relating to material resources, to manpower, to finance and to the over-all national economy.

- Materials: This category of records covers separate records for fuel, electricity, equipment, building materials, agricultural raw materials, as well as productive capacity, etc. Tabulation of material records makes it possible to establish the most rational relationship between the individual branches of the economy with reference to exchange of materials, fuel and electricity.

- Manpower[1]: This category of records relates to manpower inter alia in collective farms, individual branches and regions, professional workers, etc. Manpower records provide for the distribution of manpower resources between branches of economic activity and regions. The development of tabulated manpower records has been primarily towards more specific data, by instituting tables relating to skilled manpower, to professional workers with advanced and intermediate education, etc. in place of consolidated tables.

- Finance: This category of records is concerned with the state budget, the consolidated financial plan, the monetary plan of the State Bank, and popular income and expenditure in cash terms. The financial records allow the proper relationship to be established in distribution of the gross national product and national income, and between income and expenditure of the State and the people, and have become a firm basis for planning retail turnover and cash circulation.

- National economy: This category of records makes for proper proportions within the whole process of expanded economic production and is becoming an increasingly effective economic planning instrument.

C. Steps in the Planning Process

1. Guidelines

9. Guidelines for the planning period are established on the basis of:

- the programme of the Communist Party of the U.S.S.R. laying down the broad lines for economic and cultural construction to be attained during the 20-year period from 1961 to 1980, including targets for the first ten-year period, and

- the instructions issued by the Central Committee of the Communist Party and the Government.

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[1] Part Two, Chapter II discusses tabulated manpower records in detail.

2. Initiation of Plans

10. Planning activities per se start in the individual enterprises, lower-level building administrations, collective and state farms and territorial production authorities, which draft on the basis of these guidelines and instructions as to methods and procedures issued by GOSPLAN and the Central Statistical Office their current and forward plans with a view to maximisation of production. They show the potential for increased production and improved quality through:

- the introduction of new technical methods, advanced technology and latest experience;
- improved organisation of labour;
- better utilisation of machinery;
- improved organisation of shifts;
- more economical expenditure of materials and fuel;
- more rapid introduction of planned capacity in new undertakings and departments.

11. In its production plan, the individual enterprise includes its derived financial, material and manpower requirements. It submits its draft plan to the executive agency to which it is subordinate, the Economic Council or the Republican ministry concerned.

12. Proposals for capital construction of new undertakings are made by Economic Councils and by territorial construction authorities which decide the extent and timetable for each new project included in the construction lists. They consider the development trends of all new branches in the economic region concerned and prepare their own proposals in light of national economic planning, for submission to the Council of Ministers of the Union Republic.

3. Integrated Plans by Economic Branch

13. Integrated plans by industry or economic branch are drawn up by the Economic Council on the basis of draft plans submitted by individual enterprises within its territory. However, the integrated industry plan is not a mere arithemetical addition of individual enterprise plans. The Economic Council takes into consideration the over-all development of the industry within the framework laid down for development and incorporates such correctives in enterprise plans as it considers fit to ensure co-ordinated growth within the industry. At this stage each

department within the Council co-ordinates those aspects of the enterprise plans within the territorial jurisdiction with which it is concerned, e.g. the Finance Department co-ordinates the financial plans, the Engineering Department co-ordinates the production plans, and the Labour and Wages Department co-ordinates the manpower plans. The optimisation of financial, material and manpower resources takes place when the Economic Council integrates the individual enterprise plans into an over-all plan for an industry. It is at this level that the need for setting up new enterprises is built into the plan.

4. Unified Plan for Each Republic

14. A unified plan for each Republic as a whole is drawn up by the Planning Committee of the Republic from draft plans submitted to it by various ministries and by the Economic Council (or councils where there is more than one in a Republic).

5. The Plan for the National Economy

15. The plan of the national economy grows out of draft plans prepared by Union Republics[1], branch committees, ministries and departments and submitted to the State Planning Committee (GOSPLAN). These plans are studied and analysed by GOSPLAN in conjunction with the State Committee for Construction (GOSTROI), the Council of National Economy (SOVNARKHOZ) and the State Committee for Co-ordination of Scientific and Research Work. Decision is taken as to how closely these draft plans correspond to the general planning principles and the general targets and guidelines laid down by the Communist Party and the Government. The integration of all plans coming from all sources to ensure proper proportions required for a balanced development of the entire national economy is a major task. GOSPLAN dovetails and co-ordinates plans for the Union Republics and economic branches, prepares the necessary tabulated data and decides on the essential proportions for the development of the individual branches, with a view to ensuring the most rational economic balance of activity.

6. Approval of Plan

16. The national plan is submitted to the Council of Ministers of the U.S.S.R. for approval.

7. Implementation of Approved Plan

17. Implementation of the approved national plan is carried out by means of the day-to-day economic, administrative, educational and scientific activities of all state and social organisations.

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[1] Eighty-five per cent. of the plans come from Union Republics.

However a particular responsibility falls to the planning authorities which systematically supervise the implementation of the plan and work out measures to ensure elimination of discrepancies in individual sections and seeks out the necessary resources required for successful fulfilment of the plan.

D. Manpower Planning

1. Objectives and Methods

18. The general objective of the national plan is to ensure full employment of all able-bodied persons and their rational distribution among the various sectors of the economy. More specifically, the manpower plan which is a part of the general plan for the development of the national economy has three main objectives that are mutally related:

- a constant increase in the productivity of work for society;
- the most efficient utilisation of the manpower resources;
- appropriate organisation of wages and salaries.

Each of these objectives is reached by a systematic collection of data on current performance of the plan; and an elaboration, on that basis, of future plan targets, both short-term (year, quarter, month) and long-term (five to seven years or more).

19. Following the sequence of general planning outlined in B above, manpower plans are elaborated at the level of the enterprise or organisation, at the level of the particular industry and at the national level for the economy as a whole. There are intermediate manpower plans for the Republics, economic councils and city authorities (both over-all and by main industries). All of these plans are mutually related. The plans for the enterprises must not only correspond to the latter's interest but also to the development targets set for the industry concerned and for the national economy as a whole. This concordance is obtained in the process of consideration and analysis of plans at the industry and national levels.

20. Each of the more general plans - industrial or national - has its own targets and corresponding methods of analysis. The manpower plans of individual undertakings and organisations, taken together, determine the targets for the more general plans. However, over-all planning is not merely an aggregation of the individual plans; it also includes an analysis of the original, particular proposals and any adjustment which may be necessary to bring these into accordance with the targets and possibilities of development of the industry or national economy as a whole.

2. Scope of Planning in the Enterprise

21. At the first stage of planning, the enterprises put together plans drawn up in light of their own particular possibilities.[1] Their plans are worked out on the basis of work standards established by the scientific institutions of the particular industry. These may be detailed standards (time standards for operations) or more general in character (number of units to be served). The manpower plans of undertakings are concerned with how available man-hours should be spent in order that the production targets may be reached. The plan to increase productivity emerges mainly from the process of determining organisational and technical measures during the coming period. The plan is usually worked out with the participation of the whole personnel of the workshop, department or undertaking. On this occasion proposals for rationalisation are made by wage-earners, engineers and technicians with a view to further improvement in performance.

22. In elaborating the plan for the coming year, great use is made of data on effective progress towards plan targets in the current year. The six-monthly report provides the starting point for a first approximate assessment of current results called - in customary planning terminology - "expected fulfilment of plan". It is adjusted in accordance with the report for each subsequent month, and also includes data on the achievements planned for the remaining months. These data include indications of performance of the plan as regards numbers of personnel, productivity and the wage and salary fund.

23. Part Two, Chapter III discusses in detail the procedures used in planning the strength and composition of the workforce in an individual industrial undertaking.

3. Planning at Intermediate Levels

24. Preparation of manpower plans for a given year is started in undertakings in the middle of the preceding year. The next stage takes place when their proposals are subsequently co-ordinated into plans for the industry, or the economic region or the Republic. The main objective of planning at the intermediate levels is not only to consolidate plans submitted by the enterprises and to harmonise the interests of the whole and the parts but also to make organisational and technical arrangements for execution of the plans.

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[1] During the 1963 planning programme teams of planning specialists from GOSPLAN assisted the Republics in drawing up their plans, visiting the principle enterprises in the various regions and advising on the best way of designing plans, the use of production targets in programming techniques, economic expansion without substantial investment, etc. These visits proved very useful.

25. In contrast to the kind of planning that is done at the level of the enterprise, planning at the industrial or regional level provides an opportunity for making changes if necessary, or introducing greater precision in current conditions of production in a given undertaking. For example, introducing greater specialisation, broadening the range of articles drawn from other undertakings (inter-enterprise co-operation), introducing new machines, expanding or speeding up the construction of new workshops, engagement of additional trained workers, etc. The analysis of draft plans at the industrial or regional level provides an opportunity for detecting and eliminating various obstacles to further improvement in productivity which may or may not depend on the undertaking itself.

4. Manpower Planning for the National Economy

26. The manpower plan for the national economy lays down basis indications for the manpower plans of all undertakings and organisations. These indications include (a) the number of employees; (b) the increase in productivity per employee; (c) the "wage and salary fund" (total amount to be spent on remuneration derived by multiplying average wage rates by number of workers to be employed on basis of production targets).

27. The number of workers and the wage and salary fund are broken down into tabulations, both by organisations and by branches of the national economy. Such tabulation makes it possible to appreciate which organisations and which branches of the national economy can benefit by a planned increase in personnel or in total remuneration.

28. The manpower plan for the national economy also lays down methodological requirements in respect of all calculations reflected in the original plans; these requirements relate, in particular, to the scope and comparability of the figures stated in their reports and plans by the group of undertakings or organisations concerned (figures are to relate to the unit as it existed on 1 January of the year of the plan). The over-all plan also determines the periods in respect of which performance data must be provided and targets worked out, and the dates by which the particular plans must be submitted.

29. In the process of over-all planning, the figures stated in the particular plans, and especially the number of employees and the amount of the wage and salary fund, are analysed and compared with other reports and plan figures by means of a series of tabulations. In this way the feasibility of the plan proposals is checked and the possible extent of the planned changes is objectively determined.

30. Analysis of requirements would be impossible were it not for the fact that all undertakings and organisations unconditionally follow a single method in elaborating their report and plan figures, so that the changes in numbers of personnel, in productivity and in the wage and salary fund in a given report or plan period are comparable between undertakings or groups of undertakings.

(a) Analysis of Demand for Additional Manpower

31. In elaborating a plan for the numbers of wage-earning and salaried personnel to be employed in the country as a whole it is necessary to justify any additional demand for manpower. This is an important and complex task of manpower planning, because the rate of development of the economy exceeds the growth of the population of working age. This contradiction is resolved by a constant increase in labour productivity, due to improved technical equipment and power provision in all branches of the economy. In particular, great importance is attached to the mechanisation of operations in agriculture, so that as much manpower as possible may be released from the farms and transferred to industry, construction and other developing activities.

32. Production targets: Request for additional manpower are analysed in the light of plan targets for industry, and particularly for the production of machine tools, machines and instruments and for the introduction of new technological processes which will ensure mechanisation and automation both in industry in the narrow sense and also in construction, agriculture, transport, commerce, etc. In this way the manpower plan affects the content of industrial production targets. Accordingly, proposals regarding the number of workers and their productivity are worked out in the light of technical and material conditions, and are linked with plans for production and for the introduction of new equipment. This is another aspect of the tabulations and comparisons which are made in the process of elaborating the over-all manpower plan.

33. Organisational measures: Moreover, plans regarding the number and consequently the productivity of workers must be reinforced by indication of the relevant organisational measures: this also requires the elaboration and comparison of several sets of figures. In particular, any supplementary request for employees made in a manpower plan, must be examined in the light of the effective manpower resources of the country as a whole, by areas and occupations. This presupposes the preparation of figures indicating present manpower resources, plans for recruitment, arrangements for employment of juveniles, manpower availabilities on collective farms, plans for the development of vocational training institutions (manual and professional occupations), plans for vocational education at general secondary schools, etc. All this statistical work is intended to reveal the demand for manpower and to indicate the sources from which undertakings and organisations can be provided with personnel in the necessary quantity and with the necessary qualifications.

(b) Wage and Salary Fund

34. Control calculations and auxiliary statistics are used also to obtain, for the second basic feature of the over-all labour plan - the wage and salary fund, a figure which must be consistent with other elements of national economic planning. The wage and salary fund is compared with the plan for commercial turnover and for non-gratuitous services (transport, post, telegraph, housing, gas, electricity, theatres, motion pictures, etc.). This requires, in particular, a thorough examination and comparison of incomes and expenditure. Any increase in the output of consumption goods and development of services will determine, in the main, the necessity and possibility of increasing the wage and salary fund.

35. That part of the plan which relates to the wage and salary fund must ensure a constant rise in the level of national well-being of the workers by bringing about a per capita increase, in purchasing power and consumption goods and services particularly through a higher rate of labour productivity. This, in its turn, requires:

- that such mathematical relationships be secured as will enable the increase in productivity to exceed the increase in average remuneration, and the increase in production to exceed the increase in the wage and salary fund;
- that there be constant application, throughout the economy, of the principle of payment in accordance with the quantity and quality of the work done, and that correct relationships be established between rates of pay in the various industries, economic regions and skill groups;
- that strict control be exercised over the spending of the wage and salary fund.

36. In order that these requirements may be met, plan proposals regarding the wage and salary fund are compared, during over-all planning, with rates of productivity increase and are harmonised, for each branch of the economy and each economic region, according to the reported and planned structure of remuneration, etc.

37. If it happens that the total manpower requirements in relation to production plans exceed the available resources (wage fund) questions are raised and referred back to the agencies concerned and the appropriate corrections introduced. GOSPLAN may suggest either a further increase in productivity or a reduction in the number of auxiliary personnel. The basic objective of the national manpower plan (or balance sheet) is to plan not only the employment of the entire labour force but also to achieve its optimum distribution - regardless of the source of funds or the authority to which the enterprises are subordinated (Republics, ministries, other executive agencies).

38. In all organisations and concerns which have definite production targets, the wage and salary fund is expended in accordance with achievement of these targets. The highest economic organs supervise compliance with this rule. The wage and salary fund must also be consistent with State Bank plans for currency circulation, the plan for payments from governmental and other public agencies to the social insurance fund, expected revenue from taxation, etc.

39. In the supervision of the execution of manpower plans, the banking system has a special role. It has special powers to supervise the way the wage fund allotted to an enterprise is being spent and consequently the number of workers employed in that enterprise. The wage fund is released to an enterprise in accordance with the fulfilment of its approved plan. It is also provided that with every extra 1 per cent. of over-fulfilment an enterprise is entitled to an 0.6 per cent. increase in its wage fund. In accordance with this principle the banking agencies check on the number of workers employed and if this exceeds the permissible limit they may require the authority concerned to divert the surplus manpower to places where shortages exist. Supervision by the banking authorities enables adequate financial and economic control to be exercised over the number of employees and therefore the wage fund.

(c) Emphasis on Increased Productivity

40. It is clear from the above review of the relationships between the main features of the over-all manpower plan and other elements of national economic planning that the essential objective of manpower planning in the U.S.S.R. is to increase productivity. But all this is possible only if founded on a sufficiently rapid development of the output of production goods - which provides the material basis for increased productivity. Provision for greater productivity and for maximum saving in the use of labour in the national economy are most important elements, not only in manpower plans but in any plan for national economic development. It is from these standpoints that the plan proposals of tens of thousands of organisations and concerns are examined in the process of analysis at the higher levels.

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

I. Statistical Records and Reports on Population and Manpower Resources

1. All aspects of national economic planning in the U.S.S.R. are based on comprehensive information about the productive forces of the country i.e. the manpower, material and financial resources. The statistical services provide the necessary numerical statements of manpower availabilities which are required for the planned allocation of manpower to the various branches of the national economy and for its rational use. The purpose of this section of the report is to describe methods of recording and reporting data about the characteristics of the population and manpower resources.[1] This work is carried out under the Central Statistical Office which provides guidance on methodology, prepares model forms and directs operations concerning current statistics and organises special surveys. The work is carried out uniformly in all Republics according to unified instructions for record keeping and reporting. Compulsory returns by all undertakings, institutions and organisations, coupled with censuses and special inquiries, provide the exact data needed for the estimation of population levels and the evaluation of manpower utilisation by economic branches and regions.

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[1] Manpower resources in the U.S.S.R. comprise:

(a) persons of working age (men aged between 16 and 59 and women aged between 16 and 54), except for unemployed persons of working age suffering from disablement of the first and second categories, and unemployed persons receiving old-age pensions under special conditions (men aged between 50 and 59 and women aged between 45 and 54);

(b) employed persons outside the limits of working age (men aged over 60, women aged over 55 and young persons of either se under 16 years of age) and employed in state, co-operative or social undertakings, institutions or organisations, or in collective farms.

These age limits are adopted in statistical and planning practice in view of the fact that pension legislation entitles all employed women aged 55 or above and men aged 60 or above to cease employment and receive an old-age pension. In accordance with legislation, young persons aged under 16 are required to attend school, and may only be engaged for employment in exceptional circumstances.

A. Population Data

2. Censuses. Censuses were held in the Soviet Union in 1920, 1926, 1939 and 1959. They related inter alia to numbers, distribution and composition of the population according to sex, age, family situation, nationality, mother tongue, educational level, occupation, branch of economic and social groups.[1]

3. Current records. Current records of births, deaths, marriages, divorces and migration contain the essential figures for calculations of the population between census periods. Once each year detailed figures are prepared showing natural population changes based on monthly returns which list number of births, deaths (broken down by cause of death and age), marriages and divorces. Registration of arrivals and departures in towns and rural localities provide statistics concerning migratory movements and the characteristics of persons migrating. House registers in towns and local registers in rural areas give information on the composition of the population mainly on the basis of sex, age and social group. In combination with figures for natural change and migration, these data show, for the country as a whole and for individual republics and regions, the size and composition of the population and form the basis from which estimates are made of the future population.

4. Forecasts. Economic planning places increasing stress on long-term assessment of the level and composition of the population. Calculations are made of the likely future size and age-sex composition of both urban and rural population, for the U.S.S.R. as a whole, for the republics and for economic regions: the last long-term calculation was for the period 1961-1980. There are two stages in such calculations. The first consists of forecasting the population levels on the basis of life expectancy rates for each age, with the following constant values: (a) mortality rates, and (b) a special birthrate coefficient for women aged between 15 and 49. The second stage brings in clarifying details

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[1] The 1959 census classified the population according to the following three social groups:

(i) wage earners and salaried employees;
(ii) members of collective farms;
(iii) workers in agriculture not members of collective farms and artisans working for their own account.

on the basis of demographic and economic forecasting, e.g. reduction in death rates, increase in birth rates, migration of population from rural to urban areas in accordance with planned distribution of productive forces.

5. Forecasts of the population are prepared with the aid of electronic and other computing machines: several variants are used. The employment of machines for this purpose speeds up the process of calculation and requires the simultaneous preparation of all the material for processing in accordance with each variant. During the process of compilation or immediately upon completion, forecast figures are brought together for the age-groups of the greatest practical significance, namely:

1) children under three years of age, who are placed under special observation by the children's medical services and for whom nurseries are intended; and children aged over three and under seven years, for whom kindergartens are intended;

2) children of school age - over 7, under 8 (the first compulsory school year); over 8, under 14; over 14, under 16; and over 16, under 18;

3) the population of working age, namely males over 16 and under 60, females over 16 and under 55;

4) the population over working age - men over 60, women over 55.

6. A distinction is made between the population of working age and the able-bodied population. Handicapped persons who cannot work and are supported by the State (industrial disabled, war cripples, congenitally disabled persons and others not able to work) are excluded from the able-bodied population although of working age. Statistics of state pensions and collective farm records provide a basis for calculating the actual number of adults incapable of working.

B. Employment Statistics[1]

1. Reports from Enterprises

7. Following the standard pattern from primary accounts and for employment returns, each enterprise and organisation is required to submit reports showing how the approved production plan of volume of work has been put into effect. These reports cover the numbers and composition of the workforce and provide related data on manpower utilisation. See Appendices V and VI for facsimiles of Statistical Report No. 2T, Monthly Industrial Establishment Report on Labour Plan Fulfilment, and Statistical Report No. 4T, Semi-Annual Report, Fulfilment of Established Output Norm.

(a) Frequency of Reports

8. Undertakings in the productive branches[2] of the national economy (industry, construction agriculture, with the exception of collective farms, transport, etc.) generally submit statistical returns concerning the size of their workforce each month, while undertakings, institutions and

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[1] Employment statistics for the period 1921-1930 systematically included information from employment exchanges concerning numbers of unemployed on the first day of each month, numbers of requests for workers received from undertakings and numbers of placements made. This information was based on groups of employment, i.e. industrial employment, non-manual employment, etc. In the case of industrial employment, there was breakdown by occupation. The characteristics of the unemployed were studied by means of lists of unemployed members of trade unions. Such data showed sex, age, occupational skills, family situation, duration of unemployment, connection with agriculture and other factors. The availability of statistical data at that time was of great value in overcoming unemployment. At present there is no unemployment and there are no employment exchanges; consequently there are no statistics concerning numbers, composition and changes in the level of unemployment.

[2] See Appendix VII Organisation of Manpower Planning by Spheres of Production and Branches of Economic Activity.

organisations in non-productive branches submit quarterly returns. In addition, all undertakings, institutions and organisations supply annual returns showing the size of their workforce, averaged over the year and as of 1 January of the following year. Collective farms submit annual returns relating to numbers and utilisation of persons of working age.

9. In both the current and annual returns submitted by undertakings in the productive branches (industry, construction, agriculture, transport, etc.) totals of wage earners and salaried employees are given with reference to categories (wage earners, engineering and technical personnel, salaried employees and junior auxiliary staff). The non-productive branches do not generally make such a breakdown by categories, except in the case of special surveys. Annual reports show breakdowns by sex and for urban and rural areas.

(b) Base Data

10. Enterprises prepare their reports on the basis of primary assessment records, e.g. time clock cards, work sheets, job cards, etc. Rules for the establishment and maintenance of such records are laid down in general model instructions approved by the Ministry of Finance and Central Statistical Administration. Model forms of primary manpower records and manpower accounting records are approved by the Central Statistical Administration.

(c) Information Reported

11. Listed complement of employees: Each enterprise reports the listed complement of employees, including all categories of permanent, seasonal or temporary workers engaged for not less than five days, as well as those engaged for more than one day to perform duties connected with the basic activities of the undertaking. Listed complements show both those actually at work during the period concerned and those absent for any reason. They do not exclude persons absent owing to illness and having a certificate of temporary incapacity for work, those on normal leave or on maternity leave (and receiving social insurance benefit), workers on mission or workers detailed for social or state duties.

12. All statistical indices relating to individual workers (productivity, wages, etc.) are calculated in relation to the listed complements rather than in relation to the number of workers actually present during the period concerned. In addition to indices showing the listed complement for a given date, returns are also drawn up for the average listed complement during a reference period.

13. Classification of activities by type of work. In the preparation of returns, distribution of undertakings by various economic branches is based on a unified classification approved by the Central Statistical Office.

14. In addition to their basic activities, many undertakings also include activities not directly connected with production. These relate primarily to services for employees, such as housing and communal facilities, cultural and educational institutions (cultural centres, clubs, libraries), kindergartens, children's playgrounds, colleges and communal feeding establishments. For the purpose of consolidated returns for each branch of the national economy, the numbers of workers engaged in non-productive activities are classified according to their activities and not included in the totals of persons engaged in the undertaking's production activities, although they are included within its general activities. Persons engaged in the housing and communal facilities of an undertaking are included under the "housing and communal facilities branch", workers in restaurants and canteens in the "communal feeding branch" and persons providing services in schools and kindergartens in the "education branch".

15. Employees of undertakings in productive branches are divided into two groups, in accordance with the kind of work they do:[1] (a) persons engaged in the basic activities of the undertaking, i.e. persons participating in production; and (b) persons in other activities engaged preimarily in providing services for employees of the undertaking.

16. In returns submitted by industrial undertakings, the whole workforce is broken down according to:

(a) persons engaged in industrial production, with separate figures for wage earners, for apprentices, for engineering and technical personnel, for salaried employees and for junior auxiliary staff; and

(b) members of non-industrial organisations included on the books of an industrial undertaking.

In the construction industry a distinction is made between:

(a) persons engaged in building assembly operations and auxiliary activities; and

(b) persons engaged in other activities.

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[1] See Appendix V.

17. Utilisation of work time. Manpower accounting in undertakings within industrial branches (industry, constructio transport, etc.) also includes factors relating to utilisation of working time. In particular, labour returns by industrial undertakings submitted on a quarterly basis cover the following factors concerning utilisation of working time:

number of man-days worked;

number of wholly idle man-days;

number of man-days of absence from work;

regular leave;

maternity leave;

sickness;

other absence permitted under law (discharge of state duties, etc.);

absence with permission of management;

unauthorised absence;

holidays measured in man-days;

total of man-days of attendance and absence;

total of man-hours worked -

including overtime;

number of man-hours of idle periods within shifts.

18. Turnover: As an essential condition for successful operation it is important for undertakings to have a permanent workforce. In order to allow for this factor in statistical manpower accounting in industry, construction and undertakings in several other productive branches, data are supplied concerning number of workers engaged by undertakings during the reference period, showing the source of recruitment, as well as numbers who have left the undertaking, showing reasons for departure. Information on engagement and departure of workers is compiled only in respect of persons employed in the undertakings' basic field of activities.

2. Compilation of Employment Data by the Statistical Administration

19. The State Statistical Administration prepares the following compilations based upon the study of employment and related data reported by enterprises, institutions and other organisations:

(a) Age-sex: Once every two or three years compilation is made of the composition of the workforce by age, sex, period of uninterrupted employment and total period of employment. Information regarding the numbers of women employed in individual occupations is used in promoting further employment of women in production, particularly in skilled occupations. Information concerning the age distribution of the workforce is used in planning training. Details of distribution of workers by period of uninterrupted employment show either the success of efforts to maintain a permanent workforce or manpower turnover with its harmful impact on organisation of employment. Information on total employment periods is combined with details regarding the sex-age composition of the workforce for the purpose of various calculations, including those concerning pension benefits.

(b) Occupational composition: Twice every five years calculation is made of distribution of manpower in industry, construction, transport, communications and agriculture for each particular occupation, with separate figures for women. The programme of calculations also provides data showing the numerical relationship between workers using machinery and manual processes for each productive branch of the national economy and each branch of industry. In this connection all occupations are divided among the following five categories according to the degree of mechanisation of labour:

first group:	workers supervising the operation of automated machinery;
second group:	workers using machinery in their work (e.g. machine minders, turners);
third group:	workers performing manual work with the use of machinery (e.g. chain-fixers in crane operations);
fourth group:	workers performing manual operations without the use of machinery (e.g. digging, bricklaying, loading);
fifth group:	workers engaged in maintenance of machinery (e.g. fitters).

Calculation of the occupational composition of the workforce shows the degree of mechanisation of labour, the impact of mechanisation and the relationship between numbers employed in basic and auxiliary sections. This information is used in planning vocational training, in preparing measures for improvement in the structure of production, for further introduction of automation and mechanisation, for elimination of arduous manual labour and for transfer of women from relatively heavy and less skilled work to light and more skilled occupations.

(c) Professional and managerial personnel: Annual assessment is made of the number of professional workers with advanced and intermediate training, as well as the numbers and composition of management personnel. As a result of such assessments the statistical and planning authorities have detailed information showing availability of professional workers in the national economy according to their particular skills, with regard to distribution by economic branch, by sex, by nationality, by year of completion of studies and by distribution within individual districts and Republics. This information is widely used in planning training at those levels and in preparing measures for the most rational utilisation of such grades in employment.

(d) Administrative personnel: With a view to improving and simplifying administration, annual returns are submitted showing the numbers of administrative personnel in each department (accounting, planning and control, general offices, etc.).

(e) Duration of leave: Calculation is made of distribution of workers according to the duration of leave in order to prepare the basis for providing longer regular leave. Every worker is entitled to between two and four weeks' paid leave each year and it is intended that this should be further extended in the coming years. Some groups of workers (teachers, scientific workers, etc.) already have a longer period of paid leave.

(f) Other calculations: There are a number of other calculations based on specific tasks set for a particular period. For example in 1960 all wage earners and salaried employees were transferred to a seven-hour working day and, in the case of workers in the main mining occupations, to a six-hour day. In addition certain categories of workers (e.g. teachers and workers employed in hazardous occupations) work less than six hours a day. The statistical organs were instructed to provide regular information showing how this measure was being carried out. In this connection temporary monthly returns were introduced regarding the transfer of workers to the shorter working day, and in 1961 a special survey was made showing numerical distribution of workers according to their length of working day.

3. Statistical Reports on Vocational Training and Technical Education

20. Statistical authorities receive quarterly or half-yearly reports from vocational and technical schools, showing the number of students and a breakdown by sex, age and education. These reports also show how many have completed their studies and have been placed in employment, with a breakdown for each occupation. Undertakings submit half-yearly reports concerning training and further training. They state the number of persons receiving training or having completed training during the reference period and the number of workers receiving further training on either a part-time or full-time basis.

4. Family Budget Inquiries

21. Statistics on wages and standards of living are based on returns relating to fulfilment of planning targets according to the wage fund, on investigation into the distribution of workers by wage levels and by wage payment systems, and on selective sampling of family budgets and calculation of total family incomes, including revenue from public consumption funds. The information obtained through budget inquiries gives a picture of the standard of living of the population, and is used in calculating the total revenue of the population, as well as their real incomes, monetary budgets, tabulated manpower records, consumption funds, agricultural production records, etc.

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

II. Tabulated Manpower Records

A. Introduction

1. The foregoing section describes the comprehensive system for the collection of population and manpower statistical data; this section is concerned with how these data are shaped into technical "tools" that are essential both to the planning process itself and to the carrying out of the social and economic development plans.

2. Populations and manpower statistics are presented in a series of standard tables, based on a wide range of calculations drawn from current and special statistical surveys and from censuses and on forecasts. These tabulated manpower records are not only used as an instrument in drafting plans but they also serve as a general basis for showing proportions and relationships in the distribution of manpower within the entire social and economic structure. Tabulated manpower records are used to show existing sources of manpower, employment levels, the distribution of manpower by form of production and branch of economic activity as well as sources from which manpower may be drawn in order to carry out the specific tasks laid down in plans for increased production and socio-cultural development during the planned period. On the basis of these records specific measures are prepared with a view to supplying the necessary manpower for the national economy as well as ensuring full employment for the able-bodied population.

3. Tabulated manpower records are a series of charts compiled according to a specific system and composed of two sections: the first shows the numbers and compositions of manpower resources and the second their distribution and utilisation. The main factors in manpower distribution and utilisation shown are:

(a) Form of employment: in the national economy, in full-time study and in household occupations. In this way it is possible to establish the relationship between the total manpower resources and the number employed in the national economy, i.e. the degree of employment of the able-bodied population and to judge how the policy of universality of employment is being implemented.

(b) Employment by sphere[1] and economic branch: relationship between numbers employed in material and non-material spheres of production. Proper distribution of employment between these two spheres is of great economic value since it affects the rates of economic development. Thus, if a considerable proportion of workers are diverted to the non-productive sphere society may be deprived of a certain quantity of material benefits. Conversely, if a considerable number of manpower resources are turned to material production, thereby restricting opportunities for expansion of the non-productive sphere, this may affect economic development in succeeding years and disturb the normal process of long-term manpower replacement (by inhibiting improvement of the cultural and technical level of the workers or the development of health services).

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[1] See Appendix VII Organisation of Manpower Planning by Spheres of Production and Branches of Economic Activity.

(c) Rural and urban employment: according to economic branches. Comparison of these data makes it possible to see the rate of progress in the transfer of the population from the country to the towns and to develop measures for industrial and socio-cultural development in both areas.

4. Compilation of tabulated manpower records is not just a matter of fixing employment by branches and by forms of work. These records play an active part in drafting all national economic plans, and make for more rational utilisation of manpower resources. This is seen in the establishment of the proper proportions in distribution of manpower among the various forms of activity and economic branches and in the different regions of the country. It is of particular importance to ensure the most suitable relationship between employment in material production and in the non-productive sphere. The numbers of persons employed in the various branches of material production reflect increases in the volume of production and productivity levels. Tabulated records make it possible to ensure distribution by branches in such a manner as to provide for maximum production essential to society, with minimum labour input. In the non-productive sphere employment reflects the degree of development of cultural institutions, public health services, welfare facilities, etc., throughout the country. In this instance the criterion for distribution of employed persons by branch of activity is to ensure maximum provision of the various public services required, with the available material and manpower resources.

5. But that is only one side of the tabulated records. The other, which is of no less importance, consists of working out measures for the supply of skilled workers and the redistribution of manpower among the various economic branches and regions. Such measures are expressed in concrete form in national economic planning. They provide for the following: expansion of skilled training in vocational and technical schools, in advanced and intermediate-level professional

colleges and by means of other forms of training; organised recruitment and transfer of population to under-populated and newly developed regions. In order that tabulated records of manpower resources should meet these requirements, a whole system of tabulated records is prepared. In addition to the consolidated record, special records are compiled with respect to skilled manpower and young persons.

6. The method of applying tabulated records in employment planning is thus of vital importance in preparing national economic plans. It is an essential instrument in such planning, a means of deciding rational utilisation of manpower resources in the planning period. Tabulated records are not themselves planned; they are an instrument of planning. Therefore, constant improvement in such recording is a vital condition in raising the standard of national economic planning.

B. Model Tables

7. Following are examples or models of the principal Tabulated Manpower Records with brief description of important features and methods of calculations.

1. Models: Current Tabulated Manpower Records (Tables Nos. 1 and 2)

8. Current tabulated manpower records describe the numbers and composition of the labour force, together with distribution by branches and territories and, indirectly, the manpower potential available for the expansion of production. These records are drawn up as of 1 January and 1 July, these being the periods of the least and the greatest activity respectively in agriculture and seasonal occupations, and also for the annual average. The juxtaposition of figures for 1 January and 1 July shows seasonal fluctuation in employment.

Table No. 1

Model: Calculation of Manpower Resources for a Specific Date (1 January and 1 July) (By Republic, Region and District)

	Total	Including	
		Towns	Rural Areas
1. Total manpower resources including:			
(a) able-bodied population of working age;			
(b) employed persons above or below working age.			
2. Distribution of manpower resources			
(a) wage earners and salaried employees in state, co-operative and social undertakings, institutions and organisations;			
(b) collective farm workers engaged in the farm's production for public purposes;			
(c) other able-bodied persons (non-combined handicraft workers and others);			
(d) full-time students aged 16 or over;			
(e) able-bodied persons of working age engaged in housekeeping or in running private smallholdings.			

Table No. 2

Model: Calculation of Manpower Resources, Annual Mean

	Total	Including	
	Wage earners and salaried employees and their family members	Collective farm workers and their family members	Others (non-combined handicraft workers, etc.)
1. Total manpower resources including:			
(a) able-bodied persons of working age;			
(b) employed persons above or below working age.			
2. Total of persons employed in the national economy including:			
(a) state, co-operative and social undertakings, institutions and organisations and collective farms' production for public purposes;			
(b) running private smallholdings;			
(c) others (non-combined handicraft workers, etc.			
3. Full-time students aged 16 or over.			
4. Able-bodied persons of working age engaged in household occupations.			

9. Following are notes on the general methods of calculating the individual items in Tables Nos. 1 and 2:

- calculation of the numbers of persons of working age is based on census data and special assessments of the sex/age composition of the rural population. The level of the population of working age is calculated separately for urban and rural areas;
- the numbers of non-employed disabled persons of working age (non-employed disabled persons of the first and second categories) are calculated from returns by government social insurance organs and collective farms' annual returns;
- calculation of the numbers of employed persons outside the limits of working age is based on special assessments of numbers of wage earners and salaried employees according to age and sex as well as on collective farms' annual returns;
- the number of wage earners and salaried employees in state, co-operative and social undertakings, institutions and organisations and their distribution in the various branches of the national economy is based on data from current and annual returns;
- the numbers of collective farm workers engaged in production for public purposes by collective farms are determined from annual returns by collective farms concerning such participation by their members. Since collective farm workers are engaged in the course of one year in work relating to different forms of activity (they combine agricultural work with work in maintenance shops, building, etc.), distribution of collective farm workers in the individual economic branches is calculated from annual returns by collective farms concerning the amount of time worked in each branch of activities on the particular farm;
- the numbers of able-bodied persons engaged in running private smallholdings are calculated on the basis of sampling of budgets of collective farm workers, wage earners and salaried employees with regard to unit labour input in private smallholdings;
- numbers of full-time students aged 16 or over are calculated from returns by colleges;
- numbers of persons of working age engaged in household occupations and care of children are established as the difference between the total manpower resources and the aggregate of employed persons (including persons enaged in running of private smallholdings) and of persons of working age engaged in full-time studies;

- population is calculated according to place of residence, whereas employment is based on the workplace, that is to say the location of the undertaking, institution or organisation. To ensure that data concerning the level of manpower resources correspond to distribution by employment, the figures for total manpower resources are adjusted individually for urban districts and rural areas according to the number of workers whose place of residence is not the same as their place of work. For this purpose, on the basis of data ascertained through special returns concerning the sex/age composition of the rural population (compiled as of 1 January each year), the figure is established for the number of persons living in rural areas but working or studying in towns. This figure is subtracted from the total of manpower resources in rural areas and added to that for urban districts. Thus, persons living in rural areas but working or studying in towns, are shown both in the total manpower resources and in breakdowns under employment in urban districts.

2. Model: Summarised Table of Manpower Resources (Table No. 3)

10. The summarised table of manpower resources deals separately with able-bodied persons engaged in household activities and in running private smallholdings. This is because the latter creates production which is included in the over-all total and which must be taken into account in assessing productivity and the national income. This is also necessary in order to work out measures aimed at encouraging all such persons to participate in national production.

11. It is impossible, in a single table, to cover all the essential details necessary for an analysis of manpower resources, their distribution and their proper utilisation. That is why, in addition to a summarised table, various individual tables are generally compiled and attached as appendices; they cover the following:

(1) manpower in collective farms;

(2) labour strength of undertakings and organisations;

(3) young persons;

(4) skilled grades.

Table No. 3

Model: Summarised Table of Manpower Resources (by Republic, Region, District), for the year 19 ..

	Total	Including	
		Towns	Rural Areas
I. Total Manpower Resources			
including:			
Persons of working age[1], and persons above or below such ages who are at work.			
Redistribution of able- rural areas to towns.			
Redistribution of able-bodied population between Republics or districts:			
(a) coming from other Republics or districts			
(b) going to other Republics or districts.			
II. Distribution of Manpower Resources			
1. Wage earners and salaried employees - total			
including those covered by employment plans[2] including:			
(a) industry;			
(b) construction;			
(c) transport and communications;			

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[1] Men aged from 16 to 59, women aged from 16 to 54 (excluding non-employed disabled persons of categories I and II).

[2] Numbers of employees of undertakings, institutions and organisations under all-Union administration included in this figure are detailed according to branches.

Table No. 3 (contd.)

	Total	Including	
		Towns	Rural Areas
(d) agriculture and forestry;			
(e) trade, restaurants, central purchasing organisations and material and technical supplies;			
(f) health services and physical culture;			
(g) education, the arts and science;			
(h) housing and communal activities;			
(i) government, economic, co-operative and social administration;			
(j) other institutions and organisations.			
2. Collective farm workers engaged in production for public consumption.			
3. Persons aged 16 and above, engaged in full-time study.			
4. Other employed persons (one-man farmers, non-combined craftsmen), etc.			
5. Able-bodied persons engaged in domestic activities and running private smallholdings.			

3. Model: Manpower Resources for Collective Farms (Table No. 4)

12. Tabulated manpower records for collective farms are essential in compiling an accurate consolidated record of manpower resources in each district and Republic and for the whole of the Soviet Union. The same function is performed by tabulated records showing manpower requirements in other branches.

13. Collective farms' manpower requirements for agricultural production are calculated on the basis of planned production levels (production in volume and value, area under cultivation, number of cattle, etc.) and of standard labour-input figures based on research.

14. The consolidated tables of manpower resources include the total of collective farm workers needed to perform all agricultural work, except for persons temporarily recruited for seasonal work (full-time students aged 16 or above, collective farm workers' family members, normally employed in state undertakings and organisations), since these persons are included in the tables under their normal occupation (the former as students and the latter as wage earners and salaried employees). Otherwise, these persons would be counted twice. Persons temporarily recruited to work on collective farms are numbered in separate records.

15. In this way, the manpower tables show to what extent collective farms' manpower requirements are met, both over the whole year and during peak periods. It can then be seen whether any able-bodied collective farm workers can be released from the region concerned or whether extra hands are needed for permanent or seasonal activities.

Table No. 4

Model: Table of Manpower Resources for Collective Farms (by Republic, Territory and Region)

	Mean Annual Calculation	Peak Month
1. Manpower Resources (in thousands)		
Total		
including:		
collective farm workers of working age;		
older persons and young persons aged under 16 who are at work.		
2. Labour Input (in thousands of man-days)		
Total		
including:		
plant cultivation;		
animal husbandry;		
other branches of collective farm production for public consumption.		
3. Average Number of Days Worked by Each Active Collective Farm Worker		
4. Manpower Requirements (in thousands)		
5. Manpower Supply (in thousands) through:		
Collective farms' own manpower resources;		
Total of persons recruited temporarily		
including:		
Collective farm workers aged 16 or above and normally engaged in full-time study;		

Table No. 4 (contd.)

	Mean Annual Calculation	Peak Month
Persons aged 16 and above and normally engaged in full-time study, from outside sources (persons studying in rural secondary schools with employment training, rural vocational and technical institutes, and advanced and intermediate agricultural technical colleges);		
Workers from technical maintenance stations;		
Collective farm workers' family members normally working in state undertakings, institutions and organisations.		
6. Able-bodied Collective Farm Workers Not Engaged in Production for Public Consumption (in thousands) including:		
Persons engaged in household occupations and running private smallholdings.		
7. Total of Collective Farm Workers Who Can be Released for Work Outside (in thousands) including:		
In permanent work;		
In seasonal work.		

4. Model: Base Period Tabulated Record of Manpower Resources for Entire National Economy (Table No. 5)

16. Drafting of economic plans in the field of labour both begins and ends with preparation of tabulated manpower records. This makes it possible to find the best pattern of utilisation of manpower resources, which is the principal planning function of this system. Planning is a complex creative process based on comprehensive technical forecasting for each economic development pattern. Preparing such tables is not a mere technical process. These tables help in finding the most effective distribution patterns for capital investment and the corresponding ways of increasing productivity in each economic branch. They also serve to fix the proper location for production in the various regions of the country. At the same time such records serve as a most useful instrument in planning the rational utilisation of manpower.

17. This approach to tabulated manpower records means that they should be considered from two aspects: (a) the basic problems involved in utilisation of manpower resources and ways of solving these problems during the planning period (shortcomings in utilisation and elimination of such shortcomings); (b) methods used in preparing tables, specific practices in establishing the various sections and indices.

18. The first group of questions requires preliminary study of the situation with regard to manpower resources in the period preceding the planning period concerned. For this purpose base-period tables are used, supplemented by an extensive system of data covering the various aspects of utilisation of manpower resources.

Table No. 5.

Model: Base Period Tabulated Record of Manpower Resources of Entire National Economy

1	No. at beginning of year 2	Total 3	Wage-earners and salaried employees 4	Wage-earners only 5	Combined handicraft workers 6	Collective farm workers 7	One-man farmers and non-combined handicraft workers 8	Total at end of year 9
A. Manpower Resources								
1. Persons of working age								
including: Non-employed disabled Persons of working age								
2. Persons in employment and aged under 16 or above retiring age.								
Total manpower resources (minus non-employed disabled persons of the first and second categories and non-employed pensioners of working age).								
B. Distribution of Manpower Resources								
1. Total of persons employed in branches of material production:								

Table 5 (contd.)

1	2	3	4	5	6	7	8	9
including:								
industry;								
construction;								
agriculture;								
forestry;								
transport and communications;								
trade and communal feeding;								
centralised purchasing organisations;								
material and technical supplies;								
other branches of material production.								
Out of the total of persons employed in material production, those engaged in:								
(a) state undertakings (all branches), with separate figures for state farms;								
(b) co-operative and collective farming undertakings, with separate figures for collective farms (by branches).								
(c) private smallholdings of collective farm workers, wage earners and salaried employees (by branches).								

1	2	3	4	5	6	7	8	9
2. Total of persons employed in non-productive branches including:								
(a) in institutions and organisations providing cultural, welfare and scientific services - total								
including:								
education and health;								
housing and communal facilities;								
transport and communications for the people;								
science and scientific services.								
(b) in offices of state and economic administrations and in social organisations								
including:								
offices of state and government administrations;								
social organisations.								
3. Total of persons employed in the national economy (1+2)								

Table 5 (contd.)

1	2	3	4	5	6	7	8	9
4. Full-time students of working age (16 and over).								
5. Persons of working age engaged in household occupations and care of children.								

5. Tabulated Planning Record of Manpower Resources (Table No. 6)

19. A comprehensive approach to analysis of the utilisation of manpower resources during the period preceding the planning period concerned makes it possible to reveal any fundamental shortcomings and to work out the main trends in rational allocation of labour in the planning period. The most important instrument in such planning is the tabulation of forward records of manpower resources.

20. Tabulated planning records of manpower resources are primarily consolidated records prepared for the whole of the Soviet Union, and for the individual Republics and districts. Records are now starting to be compiled similarly for towns and rural areas in administrative regions.

21. The most important methodological principle involved is the distribution of manpower resources according to main employment. During any given year the same person may be employed in various forms of activity. Thus, not only full-time agricultural workers are engaged in agriculture during the peak season but also persons normally engaged in other fields (industry, services) students. This dual employment is common to other branches also. In order to avoid any duplication and to ensure comparability of manpower resources with utilisation data, tabulated records are based on the principle of main employment. Of course, this has a definite effect in revealing the real structure of employment, and particularly the degree of labour input in agriculture. Data concerning the number of workers from other branches who participate in agricultural activities (in annual returns by state farms and collective farms, in industrial returns, etc.) make it possible to correct the labour input distribution figures. These materials are used in calculating the level of productivity and other economic indices. In forward assessment this principle is also applied, and affects the compilation of tabulated records on the basis of which the consolidated records are drawn up.

22. Another methodological principle is that of ensuring comparability of manpower resources with utilisation factors separately for town and for country. The reason for this is that the place of residence does not necessarily coincide with the place of employment. Workers may live in the country but work in the town or vice versa. The system used is to take the place of residence with regard to manpower resources, but the place of employment or study with regard to utilisation.

23. A further principle is to ensure that national tabulated records are compiled according to data contained in state plans. They should:

- provide for comparability of all indices for both base and planning periods;
- allow for technical progress and introduction of comprehensive mechanisation and automation;
- take cognizance of improvement in workers' skills;
- reflect targets for improved productivity;
- allow for targets set for the supply of manpower to the most important branches and regions suffering from manpower shortages;
- reflect programmes for the training and redistribution of manpower and for the placement of juveniles.

24. The sex-age composition of the population is assessed in connection with calculation of the total able-bodied population for the planning period. Such assessment can be made on a sufficiently accurate basis, although it requires allowance to be made for changes in demographic indices under the impact of a broad range of socio-economic factors.

25. Once the future population levels have been assessed, it is possible to go on to the actual manpower resources. The able-bodied population is assessed from the total population level, excluding non-employed disabled persons of the first and second categories. It is important to decide the probable number of persons outside normal working age, but capable of participating in production for public purposes. In this manner, calculation is made of manpower resources which can be used in the national economy, in study and in household occupations.

26. One of the most important sections in the second part of tabulated records - utilisation of manpower resources - is planning of numbers of persons employed in material production. Distribution of such persons according to the various economic branches is carried out on the basis of calculation of productivity increase and the probable volume of production. The various factors relating to rates of production expansion and productivity increase in the light of the employment structure result in changes in that structure.

27. With a view to compiling consolidated tabulated records in the light of all relevant factors, assessment is made of output standards in relevant tabulated records, such as those covering manpower needs in the various economic branches and in agriculture, and with specific reference to collective farms. These records show the manpower requirements in each branch and the possible sources of supply. Records relating to collective farms, in particular, make it possible to show manpower requirements, possible sources of supply and the possibility of releasing workers for work in other economic branches.

28. The particular feature of these records is that they are worked out in respect of mean annual values (i.e., the average number of workers needed in the course of the year), and for the agricultural peak month. This is necessary in order to ensure that work can be performed during the shortest possible period both by permanent agricultural workers and by full-time students and by persons engaged in household occupations and in running private smallholdings, etc. However, if it is assumed that the collective farms' manpower resources should be maintained at the peak seasonal level, there will be a considerable surplus over the whole year. This is not rational. Therefore it is advisable to assume that the minimum needed in general agricultural work should be maintained on the permanent strength, in accordance with the structure of the particular farm (crop production, animal husbandry, etc.), allowing also for correlation of agricultural activities to the varying sowing and harvesting periods and the labour required for such activities.

29. Collective farms' manpower requirements are determined not only in accordance with agricultural needs, but also in the light of requirements of other forms of production for public purposes (construction industry, cultural and educational establishments, welfare facilities, etc.). The possibility of releasing workers from collective farms is considered on the basis of analysis of the manpower competition, of utilisation of working time by collective farm workers throughout the year, and of employment in household occupations and in running private smallholdings.

30. The numbers of persons employed in the various branches in the sphere of public services are decided on the basis of data relating to development of the network of undertakings and institutions and labour input standards. Each branch has its own indices by means of which the necessary standards are worked out. For example, in the health services, the index applied is the number of health workers

for every thousand hospital beds, and for every 10,000 inhabitants in the network of dispensaries; in education it is the number of school teachers, in accordance with planned numbers and sizes of classes, the syllabus, etc. Standards of this nature are prepared on a different basis for urban and rural areas, as well as for particular regions (depending on population levels and density, etc.).

31. The preparation of labour input standards is based on model undertakings for each form of activity. These standards are not rigid, since manpower requirements fall as utilisation of personnel engaged in public services becomes more effective. When these standards have been worked out it is possible to calculate numbers of employed persons by branches on the basis of plans for development of the particular network of undertakings and institutions.

32. As the records of manpower resources are tabulated, totals of the wage earners and salaried employees in the individual branches are adjusted in accordance with the totals of persons studying in senior classes in general schools or in advanced and intermediate-level professional colleges, or receiving production training. The work performed by such persons is converted in terms of the mean annual output of regular workers, in accordance with data concerning numbers of persons receiving production training, the duration of their training, the average fulfilment of output norms and their actual participation in work.

33. The information acquired in this manner with regard to distribution of employed persons throughout the economy is further adjusted when numbers of full-time students and persons engaged in household occupations have been ascertained. Those engaged in full-time studies are persons aged 16 and above at secondary schools, at vocational and technical schools or at advanced and intermediate-level professional colleges. From this total only such persons are excluded as occupy established posts in undertakings and institutions during their period of production training, and are included among regular personnel.

34. Another form of activity which diverts a number of able-bodied persons from work in the national economy is the field of household activities. The level of employment in household occupations is affected by the following factors: increases in the number of families, lack of all-round development in economic branches in the various regions, migration, increases in the birth rate, greater numbers of large families, etc. Each of these factors acts in a different manner. Expansion of the network of child welfare and education institutions (kindergartens, boarding schools, etc.) has the greatest effect in reducing employment in household occupations.

35. The minimum level of employment in household occupations is determined by the number of women having children of a specific age. In addition, the size and structure of families are taken into account. The numbers of children under school age are adjusted in accordance with plans to provide kindergartens, and, in the case of children aged from 7 to 14, boarding schools and schools for children whose parents work staggered hours. In calculation of probable employment it is also borne in mind that a specific number of women remain engaged in household occupations owing to the need to take care of old and sick people or for other reasons. These reasons and their importance are established by means of analysing the composition of the able-bodied population employed in production for public purposes.

36. Once total employment has been assessed these figures are correlated with available manpower resources. If any discrepancies arise the reasons for these are analysed and ways of overcoming such difficulties are decided. In such cases, different patterns of manpower distribution on the basis of redistribution of capital investment are selected. The pattern of manpower distribution most advantageous to the whole economy is established.

Table No. 6

Model: Tabulated Planning Record of Manpower Resources for the Entire National Economy

	Base Period			Planning Period		
		including			including	
	Total	Towns	Rural Areas	Total	Towns	Rural Areas
1	2	3	4	5	6	7
I. Manpower Resources (allowing for mechanical movement) - total						
including:						
persons of working age (excluding non-employed disabled persons of the first and second categories);						
persons in employment, aged under 16 or of pensionable age.						
II. Distribution of Manpower Resources by Form of Employment						
Total employed in production for public purposes.						
The same as per cent. of manpower resources.						
Full-time students aged 16 and above - total						
The same as per cent. of manpower resources.						
persons engaged in domestic occupations and in running private smallholdings - total.						
The same as per cent. of manpower resources						
III. Distribution of Persons Employed in the National Economy by Spheres of Production and Economic Branches.						
Total employed in the national economy.						

Table No. 6 (contd.)

1	2	3	4	5	6	7
including:						
Number Employed in Branches of Material Production, including:						
industry;						
construction;						
agriculture, including:						
state undertakings;						
collective farms;						
private smallholdings of collective farm workers, wage earners and salaried employees.						
Forestry						
Transport and Communications (providing services for productive branches)						
Trade, Communal Feeding						
Centralised Purchasing and Material and Technical Supplies						
Number Employed in Non-Productive Branches, including:						
education, manpower training and the arts;						
science and scientific services;						
housing and communal facilities;						
health services, physical culture and social welfare;						
transport and communications (providing services and in non-productive branches)						
offices of government administration, administrative organs of co-operative and organisations, credit and insurance institutions						

6. Model: Placement of Young Persons (Table No. 7)

37. The principal source of supply of additional labour lies among young people, and the main function of tabulated records of young persons is to fix the conditions for their complete utilisation in the national economy. Assessment through tabulated records enables calculation to be made of the probable total of young persons who will complete studies at the various types of schools and colleges or who will leave for one reason or another before completing studies. By covering their availability in advance, the records plan introduction of young persons into production training and employment. On the basis of such assessment, targets are established for engagement of young persons by undertakings, and proposals are prepared for their redistribution in other regions.

38. Forecasting of placement of young persons who reach working age or complete studies at general schools or vocational and technical colleges is carried out in accordance with the Act concerning strengthening of the ties between schools and life and concerning further development of the national educational system in the U.S.S.R. In connection with such forecasting, plans are worked out for the placement of young persons by economic branches and by economic regions. These plans determine the numbers of young persons available for placement on the basis of guaranteed admission to employment immediately after completion of studies.

39. Special committees composed of representatives of the local authorities and social organisations are normally set up under regional or urban soviets of workers' deputies, to examine questions concerning direction of young persons to production and productive training. Records covering placement of young persons are becoming increasingly important every year. Upon completing studies at secondary schools with productive training, all young persons receive vocational training, in accordance with which their employment placement is then effected. All elements involved are based on forecasts by the authorities responsible for national economic planning, vocational and technical education, and advanced and intermediate professional education and by economic authorities with which educational institutions are represented.

40. Distribution of young persons available for placement according to the different branches of the economy is decided in accordance with additional manpower requirements. The basic function of tables covering employment of young persons is to permit the preparation of plans for placement of young persons finishing their studies. These young persons are provided with employment in accordance with the

requirements of each economic branch. This whole question has bearings not only on general manpower records and the supply of manpower to the different branches of the economy in the various economic regions, but also on the numbers of skilled workers. This is why it is important to organise effective utilisation of young workers, particularly those having full secondary educational qualifications. Records of skilled workers show requirements in the various economic branches and how such requirements can be met.

Table No. 7

Model: Placement of Young Persons
(In Thousands of Persons)

	Total	including:	
		Towns	Rural Areas
1. Persons who will complete the eighth class in general schools and not enter the ninth class.			
2. Persons who will leave the eighth to eleventh classes of general schools before completing studies.			
Resulting total of persons not continuing studies in general schools.			
Including those who will enter:			
(a) intermediate technical colleges with full-time studies;			
(b) vocational and technical colleges;			
(c) state undertakings, institutions, organisations and collective farms.			
3. Persons who will complete the eleventh class of general schools.			
Including those who will enter:			
(a) full-time advanced colleges;			
(b) intermediate technical colleges with full-time studies;			
(c) vocational and technical colleges;			
(d) state undertakings, institutions, organisations and collective farms.			

Table No. 7 (contd.)

4. Persons who will complete studies at vocational and technical colleges and will enter employment in state undertakings, institutions, organisations and collective farms.			
5. Total of persons available for placement in state undertakings, institutions, organisations and collective farms.			

Note:

1. Separate calculations are made for the two sexes.
2. Distribution of young persons entering employment is determined according to industrial and economic branches.

7. Model: Long-term Skilled Manpower Forecasting (Table No. 8)

41. A particular purpose of skilled manpower records is to show requirements by occupation and sources of supply. Training plans for skilled workers are based on additional skilled manpower requirements of each economic branch, allowing for the period of training in schools or training institutions or in-plant training through individual or group instruction. Therefore the forecasts relating to skilled manpower must be prepared in accordance with the needs in two or three years' time. For instance in planning admission of young persons to vocational and technical colleges with three-year courses in 1962, attention must be paid to the need for such persons in 1965.

Model: Long-term Skilled Manpower F

Occupation	Actual Numbers of Skilled Workers at Beginning of Planning Year	Planned Numbers of Skilled Workers for End of Planning Year	Additional Requirements				
			For Increased Numbers	For Replacement (Natural loss, Military Service, Full-time Study etc.)	Total	Training and	
						Secondary Schools With Production Training	Vocational and Technical Colleges

Table No. 8

: Long-term Skilled Manpower Forecasting

Projected Sources for Supply of Manpower Requirements							
Training and Graduation				Recruitment of Skilled Workers From Among Workers Released From Other Undertakings and Organisations, Demobilised, etc.	Additional Training Requirements		
Secondary Schools With Production Training	Vocational and Technical Colleges	In-Plant Training	Other Forms of Training		In Secondary Schools with Production Training	In Vocational and Technical Colleges	In-Plant Training

8. Model: Consolidated Table Showing Coverage of Manpower Requirements of the National Economy for 19.. (Table No. 9)

42. In order to organise transfer of population between regions and to improve organisation of training facilities, tabulated calculations are made in connection with the supply of manpower to the various Republics and regions, in relation to employment plans. For instance, in order to calculate how many extra workers are needed in any particular branch of the economy, the first thing is to determine needs for the whole planning period. Additional requirements comprise extra manpower (the difference between projected manpower needs and current availability during the basic period) and manpower needed to replace losses (natural losses, departure in order to take up full-time studies, military service, etc.). Allowance must also be made for replacement of workers leaving the region on termination of contract or for other reasons.

43. The main sources of additional manpower for state undertakings and organisations in Republics and economic regions are as follows:

(a) young people reaching working age and finishing full-time study at vocational and technical colleges, secondary schools with industrial education, compulsory eight-year schools (and not continuing full-time study), and advanced or intermediate professional colleges;

(b) collective farm workers recruited for permanent or seasonal outside work;

(c) persons of working age hitherto engaged in domestic activities, and running private smallholdings, and persons demobilised from the army.

44. Another source consists of students at daytime sections of advanced colleges and students at intermediate professional colleges working in regular posts, as well as students at vocational and technical colleges and in the upper classes of secondary schools with industrial training who are engaged in productive labour during the time of their vocational training (their total being calculated in accordance with the mean average number of workers).

45. When extra manpower requirements are detailed together with sources of supply, it is important to ensure whether local manpower resources will suffice.

46. On the basis of the forecasts for the planning period, definite plans are prepared to supply undertakings and organisations with the workers they need. At the same time, the forms of supply are specified, whether by organised recruitment, resettlement (for state farms and collective farms), appeals to young persons or by other means. Organised transfer of manpower reserves between different Republics is provided for in national economic planning, and transfer between different districts within one and the same Republic or economic region is covered by the development plans for the particular Republic, region or district.

Table No. 9

Model: Consolidated Table Showing Coverage of Manpower Requirements of the National Economy for 19

(In Thousands of Persons)

	Total	Including Undertakings, Institutions and Organisations			
		sovnarkhozes	local soviets	All-Union, Union-Republic, and Republic Ministries and Authorities detailing individual Ministries and Authorities	Other Institutions
I. Number of employed persons according to plan (or calculation) for the quarter with peak manpower requirements in the planning year.					
II. Anticipated number of wage earners and salaried employees at the beginning of the planning year					

Table No. 9 (Contd.)

III. Increase or decrease in numbers of workers (I minus II).				
IV. Anticipated departure of workers for the following reasons:				
1. Natural loss departure for full-time study or military service.				
2. Departure from the district or Republic (upon completion of contract).				
V. Additional manpower requirements for the planning year (IV ± III).				
VI. Sources of supply:				
1. Persons completing studies at vocational and technical colleges.				
2. Persons completing study at secondary schools with industrial training.				

Table No. 9 (contd.)

3. Persons completing study at advanced or intermediate professional colleges.					
4. Persons completing study at general schools and not continuing full-time study.					
5. Students at day-time advanced colleges and at intermediate professional colleges working in regular posts.					
6. Students at vocational and technical colleges and in the tenth and eleventh classes of secondary schools with industrial training, performing work during industrial training; calculated in accordance with the annual average number of workers.					
7. Possible recruitment for public production purposes of persons of working age engaged in domestic activities and running private smallholdings, and persons demobilised from the army.					
8. Recruitment of collective farm workers for employment in state undertakings and organisations:					
(a) for seasonal work (peak agricultural month);					
(b) for permanent work.					

Table No. 9 (contd.)

9. Possible participation by students at rural secondary schools with employment training, rural vocational and technical colleges, and advanced and intermediate agricultural colleges in agricultural activities on state farms (at peak times).					
Total from all sources.					
VII. Manpower deficit.					
VIII. Manpower surplus.					

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, AND UTILISATION

III. Planning the Strength and Composition of the Workforce in an Undertaking

A. Introduction

1. The methods and procedures used by an individual undertaking to determine its staffing pattern, by numbers and categories of workers, is seen most clearly in light of: (1) how manpower plans relate to all other plans; and (2) the extent to which each undertaking is provided with standards and other technical guidance for making this determination.

1. The Relation of Manpower Plans of an Undertaking to Over-all Planning

2. The manpower plan is part of the general plan for the development of the national economy. It has three main objectives which are mutually related:

(a) a constant increase in the productivity of work for society;

(b) the most efficient utilisation of the manpower resources of the community;

(c) appropriate organisation of wages and salaries.

Each of these objectives is reached by (a) systematic collection of data on current performance of the plan; (b) elaboration, on that basis, of future plan targets, both short-term (year, quarter, month) and long-term (five to seven years or more).

3. Manpower plans are elaborated (a) at the level of the undertaking or organisation; (b) at the level of the particular industry; (c) at the level of the national economy as a whole. Accordingly a distinction must be made between: the over-all manpower plan for the national economy; intermediate plans for the federated Republics, economic councils and city authorities (both over-all and by main industries); and particular plans within a given industry for individual undertakings and organisations.

4. All these three kinds of manpower plans are mutually related. The plan for the undertaking must not only correspond to the latter's interests but also to the development targets set for the industry concerned and for the national economy as a whole. This concordance is obtained in the process of consideration and analysis of plans at the industrial and over-all national levels.

5. Despite the great importance of national analysis, including co-ordination of totals from various manpower plans and their conversion into a sound and consistent series of targets, the decisive prerequisite for a realistic, feasible plan is the elaboration of proposals in the undertakings and organisations themselves.

2. Technical-Industrial-Financial Plan of the Undertaking

6. There are forward and current aspects in planning the productive and economic activities of an undertaking. Forward planning of undertakings is conducted on the basis of control figures (tasks) set by a higher organ, the existing economic pattern, recommendations made by scientific and research institutes, and calculations made by the undertakings themselves of their productive capacity. The tasks for the forward plan are set out in concrete terms in current planning, i.e. in the annual technical-industrial-financial plan of the undertaking.

7. This plan is the programme for the productive and economic activities of the undertaking, developed collectively on the basis of the national plan. The annual plan is subdivided into three-monthly plans. The principal sections of the plan relate to: production, technical development, technical and organisational measures, material and technical supplies, manpower, production costs and finance.

8. Manpower planning includes plans for the growth of productivity, defining the required strength and composition of the labour force, the wage fund and the average wage. The most important task when planning the labour strength is to decide the real requirements of an undertaking as regards wage-earners and other classes of workers, in order to carry out the productive process without interruption and in fulfilment of the undertaking's plan.

3. Principal Features of the Manpower Plan of the Undertaking

(a) Initial Data

9. The following initial data are most important for manpower planning at the level of the undertaking and especially for determining how available man-hours should be spent in order that the production targets may be reached:

(a) the production target (quantity and type) for each workshop and workplace;

(b) the plan for organisational and technical action in the coming year, aimed at economising manpower;

(c) standards for the working time to be spent on particular operations;

(d) standards for the performance of jobs in which there are no time standards for particular operations.

(b) Norms

10. Standards for the time to be taken in performing industrial operations are established by the research institutions of the particular industry. Thus, the initial manpower plan is worked out in the undertaking on the basis of systematically corrected and technically justified work norms, either of a detailed character (time standards for operations) or more general (number of units to be served).

11. The total time to be spent i.e. the number of workers to be employed during the plan period on work for which there is a time norm may be expressed in the equation

$$W = \frac{OS}{CH}$$

where W is the number of workers,
O is the output target,
S is the standard time to be taken in producing one unit of output (according to the plan of organisational and technical measures),
C is the coefficient denoting the extent to which the standard time is expected to be reached, and
H is the number of hours to be done per worker in the plan period, having regard to the legislation on hours of work and the normal number of working days less statutory paid holidays, sick leave, maternity leave, leave to perform state and social obligations, etc.

12. The total time to be spent i.e. the number of workers to be employed on jobs for which there are no time norms may be expressed in the equation

$$W = \frac{U}{S\ C}$$

where W is the number of workers,

U is the aggregate number of units (i.e. uniform pieces of equipment) to be served by the members of the particular occupation or group of occupations,
S is the standard performance of one worker per shift (expressed in number of units served), and
C is the coefficient of use of total working time having regard to the normal number of absences.

13. Norms relating to the personnel structure of an undertaking are discussed in B below and the system of ratios of administrative, technical and engineering and salaried employees according to types of undertakings is discussed in C 2. below.

(c) Staff Participation in the Planning Process

14. The plan to increase productivity emerges mainly from the process of determining organisational and technical measures for the coming period. This plan is usually considered and worked out with the participation of the whole personnel of the workshop, department or undertaking. On this occasion proposals for rationalisation are made by wage-earners, engineers and technicians with a view to further improvement of performance.

B. Standard Personnel Structure of an Industrial Enterprise

15. The personnel of an industrial undertaking is organised according to a standard structure. Following is a description of the categories of personnel making up this structure which is also illustrated in Diagram No. 1.

16. Workers in an undertaking are of two major types: industrial and non-industrial. In the industrial category appear all the basic working personnel engaged in production and ancilliary services. The non-industrial category includes personnel connected with communal housing, kindergartens and crèches, cultural and educational organisations (clubs, libraries), medical and health institutions (polyclinics, hospitals, dispensaries, etc.).

17. As regards executive functions, workers in the industrial category are divided into the following: wage-earners, engineering and technical staff; salaried employees; teachers; junior auxiliary personnel; safety staff.

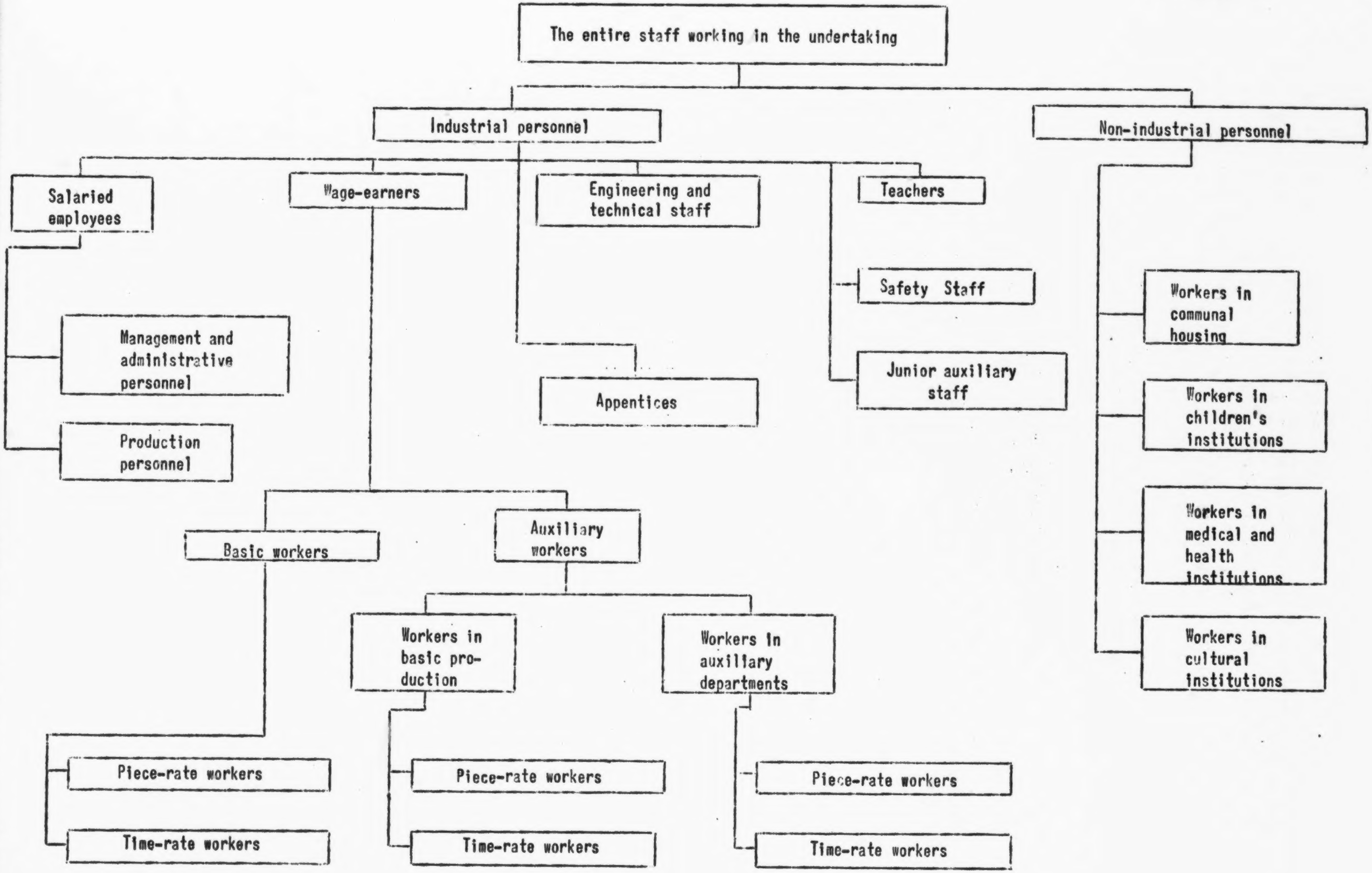
18. From the point of view of production, wage-earners are divided into basic, i.e. directly concerned with production, and auxiliary, the latter assisting the basic workers and supplying them with all the requisites for basic production (tools, transport, etc.). In their turn auxiliaries subdivide into auxiliaries employed in basic departments and workers employed in auxiliary departments.

19. In planning, a distinction is also made between workers employed on tasks subject to norms, i.e. piece-workers, and those not subjected to norms, i.e. time-rate workers. Apart from this, workers can be differentiated according to occupation and skill.

20. The engineering and technical personnel consists of those workers who are immediately and directly connected with production and management - foremen, heads of sections and shops, managers, their deputies for production problems, senior specialists, and also members of other departments and services (production, building and planning departments, personnel and wages departments, progress chasers, etc.).

Diagram No 1

DIAGRAM OF THE PERSONNEL STRUCTURE IN AN UNDERTAKING


The entire staff working in the undertaking
Industrial personnel
Non-industrial personnel
Salaried employees
Wage-earners
Engineering and technical staff
Teachers
Safety Staff
Junior auxiliary staff
Appentices
Management and administrative personnel
Production personnel
Basic workers
Auxiliary workers
Workers in basic production
Workers in auxiliary departments
Piece-rate workers
Time-rate workers
Piece-rate workers
Time-rate workers
Piece-rate workers
Time-rate workers
Workers in communal housing
Workers in children's institutions
Workers in medical and health institutions
Workers in cultural institutions

21. The engineering and technical personnel subdivide again into management and administrative personnel and production personnel. The management and administrative personnel include engineering and technical personnel and salaried employees exercising the functions of management over production. Engineering and technical workers who play a direct part in the production of goods are counted as production personnel.

22. The salaried employees include the whole of the accounting and office organisation, and members of supplies and stock departments administering the economic unit.

C. Methods and Procedures of Determining Manpower Requirements

23. The determination of quantitative requirements for manpower requirements by categories of workers is preceded by certain basic calculations.

1. Basic Calculations

24. The importance of standard accounting of numbers of workers and of working time in planning manpower requirements and utilisation is fully apparent. Following is a description of the methods used in carrying out the following basic calculations: average number of listed workers; average working time of an individual worker; average duration of leave; and duration of working day.

(a) Average Number of Listed Workers

25. Calculation of the number of workers is on the basis of the listed complement. This includes not only those at work at a given time (the actual complement) but also those employed but not at work, e.g. absent because of sickness, on vacation, or temporarily assigned elsewhere.

26. Since the listed complement is continually changing because of engagements and dismissals it is necessary to calculate the average number of listed workers for the period under consideration in order to determine the manpower resources available as well as the actual manpower strength at any given time. The average number of listed workers is obtained by dividing the total listed complement for every day of the month (including rest days and holidays)[1] by the number of days in the calendar month.

$$\bar{L} = \frac{L_1 + L_2 + L_3 \ldots\ldots + L_n}{N}$$

---

[1] The listed complement of workers on rest days and holidays is determined by taking the previous day.

where $\bar{L}$ = average number of listed workers employed during the month

$L_1 L_2 L_3$ = listed complement on each day of the month

N = number of days in the given calendar month.

27. The average number of listed workers employed during the quarter (or year) is obtained by dividing the sum of the average monthly total of listed workers for the quarter (or year) by the corresponding number of months. For example, it is necessary to determine the average number of listed workers employed in an undertaking during a quarter, given the following facts:

Months	January	February	March
Average number of listed workers	3,000	3,100	3,200

The average number of listed workers is:

$$\frac{3{,}000 + 3{,}100 + 3{,}200}{3} = 3{,}100 \text{ persons}$$

(b) Time Worked by Average Listed Worker

28. Planning the number of workers for an undertaking is based on indices for the utilisation of working time, i.e. man-hour, man-day, man-month, man-year. The number of man-days and man-hours worked by an average listed worker in either current or forward records indicates the current or planned utilisation of working time. The calculation of the average number of hours or days worked by one worker during a year, as illustrated in table No. 10 is in four stages: calculation of nominal time; calculation of the effective time; calculation of actual time; and calculation of the average number of hours worked by the individual worker per year. The effective time is obtained by subtracting time lost by absence for various causes from the nominal time.

Table No. 10

Time Worked by Average Listed Worker

		Unit of Measurement	Current Record for 1963	Plan for 1964
I.	Calendar period	Days	365	366
	Rest days and holidays	"	57	57
II.	Nominal time	"	308	309
	Absence from work:			
	1. Normal and supplementary leave	"	20.8	21
	2. Maternity leave	"	6.2	6.8
	3. Fulfilment of government and social duties	"	1.8	1.8
	4. Sickness	"	8.2	7.4
	5. Absence with permission of management	"	1.1	1.0
	6. Absence without permission	"	0.4	-
	7. Idle time	"	0.3	-
	Total absences		38.8	38.0
III.	Effective time	"	269.2	271.0
IV.	Average duration of working day	Hours	6.68	6.72
	1. Idle time during shifts	"	0.15	-
	2. Nursing breaks	"	0.07	0.078
V.	Actual time worked	"	6.46	6.642
VI.	Average number of hours worked by individual worker per year	"	1,739	1,800

(c) Average Duration of Leave (Table No. 11)

The following table illustrates how the average duration of leave for an individual worker is calculated.

Types of leave	Number of workers	Duration of leave in days[1]	Total number of leave days
1. Normal leave	1,417	12	14,400
2. Additional leave because of hazardous working conditions	84	12	1,008
3. Ditto	36	6	216
4. Additional leave for young persons up to 18 years	10	13.6	136
5. Additional leave for those attending schools for young workers			
- attending 10th class	39	20	780
- attending 7th class	25	15	375
6. Additional leave for those attending:			
- 1st and 2nd courses			
- advanced evening schools	76	20	1,520
- intermediate evening schools	35	10	350
- intermediate and advanced correspondence schools	78	30	2,340
- 3rd and subsequent courses			
- advanced evening schools	63	30	1,890
- intermediate evening schools	40	20	800
- intermediate and advanced correspondence schools	65	40	2,600
7. Additional leave because of continuous employment	1,000	3	3,000
Totals	1,417		29,415

The average duration of leave per worker is 21 days, i.e. 29,415 divided by 1,417.

---

[1] Number of working days per month is taken as 25.6.

(d) Duration of Working Day

29. To determine the number of working hours of an individual worker per year it is necessary to know not only the effective number of days per worker per year but also the average duration of the working day. In order to find out the latter data about the number or proportion of workers with working days of different length are needed taking into account the reduction of working time on days prior to holidays or rest days.

30. Assuming that 90 per cent. of the workers have a seven-hour working day and 10 per cent. a six-hour working day, the average duration of the working day in the planned period will be 6.72 hours $\angle(7 \times 0.9 + 6.01) - \frac{(52 + 5)1}{309}/$

31. From the number of effective days in the year and the actual average length of the working day can be obtained the number of hours worked per worker per year. In the foregoing example it equals 1,800 hours (271 x 6,642).

2. Determining Quantitative Manpower Requirements by Categories

(a) Basic Workers

32. Methods of calculating the quantitative requirements of basic workers differ on account of certain characteristics relating to the nature of the work and production in each branch of industry. In mechanical engineering, for example, the total number of basic workers employed on tasks subject to norms is generally calculated by the undertaking on the basis of existing time norms (output). In this event the data from which to calculate the number of basic piece-rate workers are: amount of the work, average number of hours worked per worker per year, planned organisational and technical measures for raising the productivity of labour, and the planned coefficient of fulfilment of the time norms (output).

33. The calculation begins with the determination of the normative labour content of the planned work, expressed in the norm-hours required for the fulfilment of the production programme. The standard labour content of all products produced by the factory is equal to the sum of the products of standard labour content for each type of article during the whole cycle of production laid down in the production programme for each. In addition, unavoidable loss of time expressed in norm-hours is taken into account for uncompleted production at the beginning and end of the year. This consists of the application of the work left uncompleted to individual products. To obtain this the labour content is determined for each product per 1,000 roubles of its wholesale price after deducting the cost of additional items. Changes in the residue of work left uncompleted for each individual product are multiplied by the resultant norms of labour content. The calculation of the normative labour content of a plan of work for gross production and services between departments is shown in table No. 12.

Table No. 12

Calculations of Labour Content in Production According to 1964 Production Plan

(Provisional Figures)

Title	Unit of measurement	Quantity according to 1964 plan	Time norms per unit product (per hour)		Labour content according to 1964 plan (in thousands of norm-hours)
			Actual 1963	Planned 1964	
Comparable products					
Pump A	Per Unit	18	1,200	1,150	20.7
" B	" "	116	1,930	1,830	213
" C	" "	120	1,758	1,650	198.8
" D	" "	1,500	300	275	412.5
" E	" "	130	419.2	400	52
" F	" "	330	540.0	500	165
" G	" "	1,000	321	275	275
Total of comparable products		3,214			1,337
Non-comparable products					
Pump P	Per Unit	110		840	92.4
" K	" "	87		2,000	174.0
" Z	" "	250		600	150.0
" M	" "	50		3,000	150.0
Total pumps		3,711			1,903.4
Spare parts for pumps	Thousands of roubles	400.0		300	120
Other products	"	100.0		600	60
Overhaul and capital construction services	"	80.0		650	52
Total production of goods	"	12,660.0			2,135.4

Table No. 12 (contd...)

Title	Unit of measurement	Quantity according to 1964 plan	Time norms per unit product (per hour)		Labour content according to 1964 plan (in thousands of norm-hours)
			Actual 1963	Planned 1964	
Changes in residue of work uncompleted at beginning and end of year	Thousands of roubles	+ 260.0		167	43.4
Changes in residue of specialised equipment: used in actual production at beginning and end of year	"	+ 80.0		600	48
Total gross production		13,000.0			2,226.8
Interdepartmental services 3.5 per cent.					78.2
Total for plant					2,305

34. The basis used in planning time norms for a unit of production is the plan of organisational and technical measures directed towards reducing the labour content (the amount of labour expended on a unit of production). In practice, it is normal to calculate the planned percentage fulfilment of the norms in order to estimate the time needed to carry out the production programme. As a general rule, this percentage is represented by the extent to which the norms are fulfilled by basic piece-rate workers during the last few months of the base period.

35. In the foregoing example, in order to fulfil the production programme in the planned period (as can be seen in the table) 2,305,000 norm-hours will have to be used. In fact, the degree to which norms are fulfilled, as well as the elaboration of concrete measures, producing a reduction of labour content in the planned period, is dependent upon the degree of fulfilment of norms according to plan, and this is equal to 115 per cent. Hence, the time necessary to carry out the production programme is 2,004,300 man-hours $\left(\frac{2{,}305 \times 100}{115}\right)$.

36. After calculating the real time needed to perform a given amount of work, according to the record of time worked, the average number of work hours per worker per year, is determined (according to the data shown in table 2 this is 1,800 hours). By dividing the time actually needed for a given amount of work established under the production programme, expressed in man-hours, by the average number of work hours per worker one arrives at the planned requirements of basic piece-rate workers. In this example it comes to 1,113 persons (2,004,300 divided by 1,800).

37. To calculate the number of basic piece-rate workers by occupation and category use is made of the above-mentioned method on the basis of the normative labour content of the production programme by occupations and categories, and of the differentiated planning coefficients of the fulfilment of norms by categories and of the budgeting of working hours by occupations.

38. The number of basic workers employed on work not subject to norms is related to service norms and working positions. The method is used to calculate numbers of workers in certain basic occupations in the chemical, metallurgical and a variety of other branches of industry, and also to establish the number of auxiliary time-rate workers.

(b) Auxiliary Workers

39. Auxiliary workers can be subdivided into three basic groups. To the first group belong auxiliary workers who have a certain range of duties expressed in production norm-hours. To calculate the number of such workers the same method is used as shown above for basic piece-rate workers. The only difference is that the number of basic workers is derived from the labour content of the products turned out (according to the labour expended by basic workers) whilst the number of auxiliary workers is derived from the labour content of auxiliary operations (use of tools, overhaul, loading and unloading, etc.).

In general, the number of auxiliary workers in this group is found by applying the formula:

$$W_1 = \frac{T_v}{F_{pc} \times T_h} \times 100$$

Where: W_1 = the planned average listed number of auxiliary workers;

T_v = the planned volume of the work in norm-hours;

F_{pc} = the planned percentage of fulfilment of the norms;

T_h = the average working hours per worker per year.

40. The second group includes auxiliary workers carrying out duties for which service norms have been laid down. These are workers responsible for repairing and servicing equipment (service engineers, electricians, transmission belt engineers, greasers), attending on the work performed by basic workers (packers, fetchers and carriers), the receipt of materials, of finished products (inspectors of the technical control section) etc.

The numbers in this group of workers can be found by applying the formula:

$$R_{w2} = \frac{P \times S}{N} \times C_1$$

Where: R_{w2} = required number of workers;

P = over-all amount of equipment or number of working places filled by workers;

S = number of shifts;

N = service norms of individual workers for the number of units of equipment or of working places;

C_1 = coefficient of actual to listed requirements.

41. Example: To determine the number of duty fitters and electricians in plans for 1964 given the following data:

(a) according to the inventory a shop has, on 1 January 1964, 240 units of equipment of the same type and in the planning period the number is to be increased by 25 per cent.;

(b) in accordance with operative norms a duty fitter attends 30 units of equipment, and a duty electrician 20;

(c) according to the record of hours worked (table No. 10) the nominal time is 309 days and the actual time 271 days;

(d) two-shift working is in operation.

The calculation proceeds as follows:

(1) the number of units of equipment in the planning period amounts to 300 units (240 x 1.25);

(2) the required number of duty fitters, calculated according to formula (3) is 23 persons ($\frac{300 \times 2}{30} \times \frac{309}{271}$);

(3) the same formula is used to determine the requirements of duty electricians. This amounts to 34 workers ($\frac{300 \times 2}{20} \times \frac{309}{271}$).

42. To the third group belong auxiliary workers for whom neither a set amount of work nor service norms can be laid down. They carry out work in certain working places (regardless of the amount involved) and are connected with the concrete duties of servicing (crane operators, hoist operators, storekeepers, assemblers, etc.).

The number of workers in this group can be obtained according to working positions by the following formula:

$$R_{w3} = P \times S \times C$$

Where: R_{w3} = required number of workers;

P = number of working places;

S = number of shifts;

C = coefficient of actual to listed requirements.

43. Example: There are three gantries in a shop. Each is served by a crane operator and a hoist operator. The shop works two shifts. Nominal time is 309 days and actual time 271 days. To find the requirements of crane operators and hoist operators the calculation proceeds as follows:

(1) apply formula (4) to obtain the requirements of crane operators, i.e. seven persons ($3 \times 2 \times \frac{309}{271}$);

(2) seven hoist operators are also needed ($3 \times 2 \times \frac{309}{271}$).

44. In recent planning there has been increasing application of norms to determine the number of auxiliary workers. These norms give not the listed but the actual number of auxiliary workers corresponding to the actual labour content of each group of auxiliary duties.

(c) Administrative, Technical and Engineering Workers and Salaried Employees

45. The number of administrative, technical-engineering and salaried workers in an undertaking is based on manning standards prepared in accordance with the model administrative scheme for the undertaking. The model administrative schemes are worked out for each branch of industry. A classification of undertakings in a given branch is produced for this purpose. They are grouped into unified types according to production management. Varying technical and economical indices can be used as a basis for classification according to the extent and complexity of organisations of production.

46. For example the following technical and economic indices are used to group undertakings engaged in the production of foodstuffs into homgeneous types:

(a) total annual "net production" (difference between the value of the products and the value of raw materials, electrical power, fuel, expense involved in setting up equipment);

(b) value of capital investment (excluding buildings and installations);

(c) range of goods produced (to a certain extent this index points to the specific nature of production of foodstuffs);

(d) number of industrial workers.

47. All undertakings under the Moscow Municipal Economic Council that are engaged in the manufacture of foodstuffs, are divided into four groups on the basis of the foregoing technical and economic indices. For each group of undertakings a model administrative scheme has been prepared.

Table No. 13

Moscow Undertakings Manufacturing Foodstuffs Grouped According to Technical and Economic Indices

Indices	Groups of Undertakings			
	"A"	"B"	"C"	"D"
Net production (mill.roubles)	more than 4.5	2.5-4.5	0.5-2.5	up to 0.5
Capital investment (excl. buildings and installations) (mill.roubles)	" 1.1	0.7-1.1	0.3-0.7	" 0.3
Range of articles (number of different products)	" 50	25-50	10-25	" 10
Number of industrial workers	" 1,000	500-1,000	100-500	" 100

48. Agricultural implement manufacturing plants are classified according to type, quantity and nomenclature of the products. The quantity of production is determined by the number of workers engaged in basic activities.

Table No. 14

Classification of Agricultural Implement Manufacturing Plants

Types of production	Groups of factories by numbers of workers			
	1	2	3	Factories not organised into shops
Production of tractors, motors, combines of all types, self-propelling cotton-picking machines, batteries of machines	more than 5,000	3,000-5,000	500-3,000	up to 500
Production of sowing machines, ploughs, cultivators, cutters, mowers, harvesters, grain cleaning and other machines	more than 6,000	3,000-6,000	500-3,000	up to 500

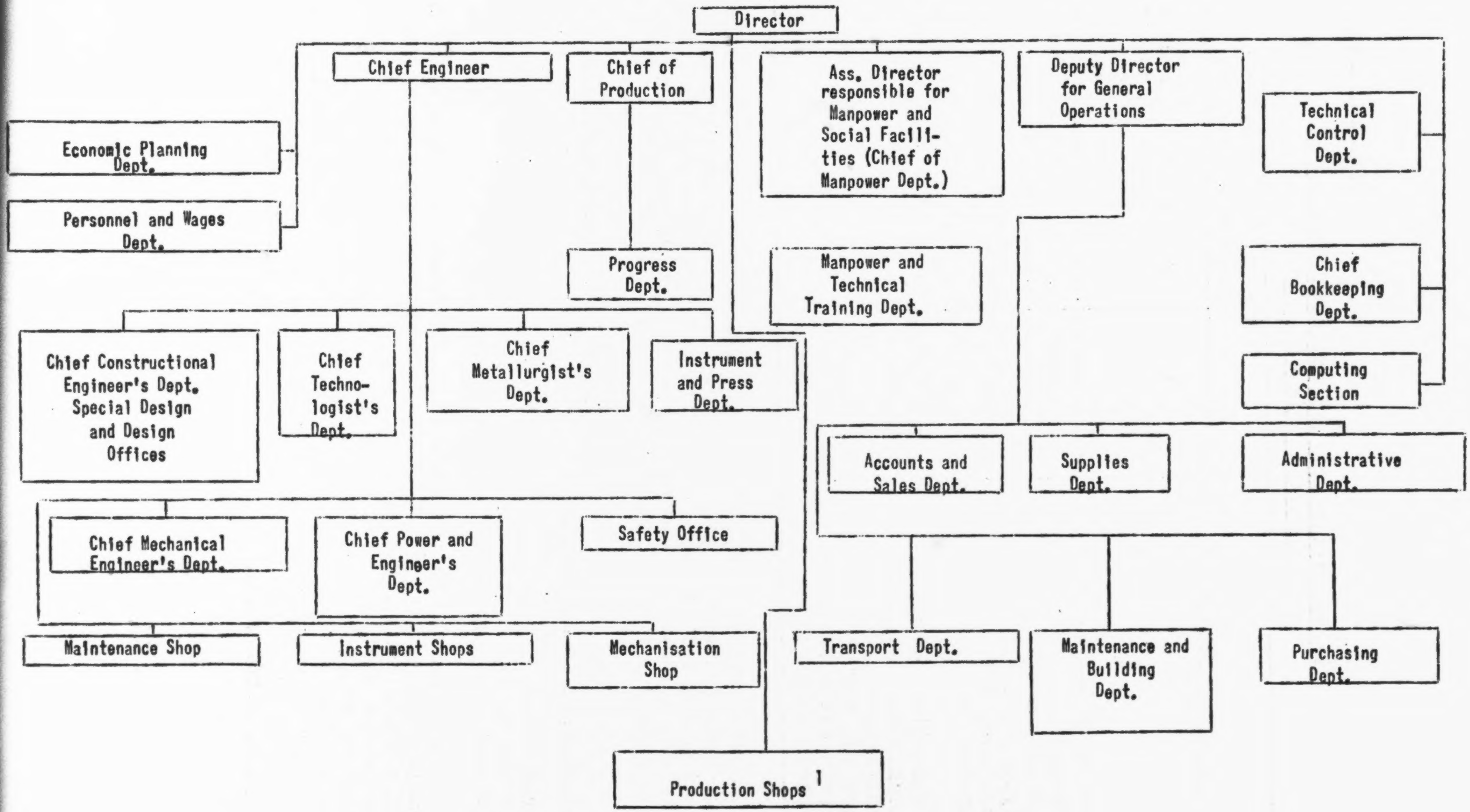
49. Diagram No. 2 shows the standard organisation scheme for undertakings in group 1 above, i.e. factories producing agricultural implements and employing more than 5,000 workers. Diagram 3 shows the standard organisation scheme within the basic production shops of such an undertaking.

50. The number of technical and engineering workers as well as of salaried employees in the structural subdivisions of the factory management and shops depends primarily on the scale of production, the number of branches and the complexity of goods produced, the degree of mechanisation and automation of the processes of production and management.

51. Norms for the number of staff are established on the basis of an analysis made of the functions performed by workers. This means taking into consideration the possibility of expanding shops and sections, the centralisation of services and mechanisation of controls, accounting, improving the system of planning, statistics and records, etc. Indices from which are derived the numbers of workers in the corresponding structural subdivisions are used for working out norms. These indices differ for each type of subdivision.

Diagram No. 2

Standard Organisation Scheme of Factories Producing Agricultural Implements and Employing More Than 5,000 Workers


Director
Chief Engineer
Chief of Production
Ass. Director responsible for Manpower and Social Facilities (Chief of Manpower Dept.)
Deputy Director for General Operations
Technical Control Dept.
Economic Planning Dept.
Personnel and Wages Dept.
Progress Dept.
Manpower and Technical Training Dept.
Chief Bookkeeping Dept.
Computing Section
Chief Constructional Engineer's Dept. Special Design and Design Offices
Chief Technologist's Dept.
Chief Metallurgist's Dept.
Instrument and Press Dept.
Accounts and Sales Dept.
Supplies Dept.
Administrative Dept.
Chief Mechanical Engineer's Dept.
Chief Power and Engineer's Dept.
Safety Office
Maintenance Shop
Instrument Shops
Mechanisation Shop
Transport Dept.
Maintenance and Building Dept.
Purchasing Dept.
Production Shops 1

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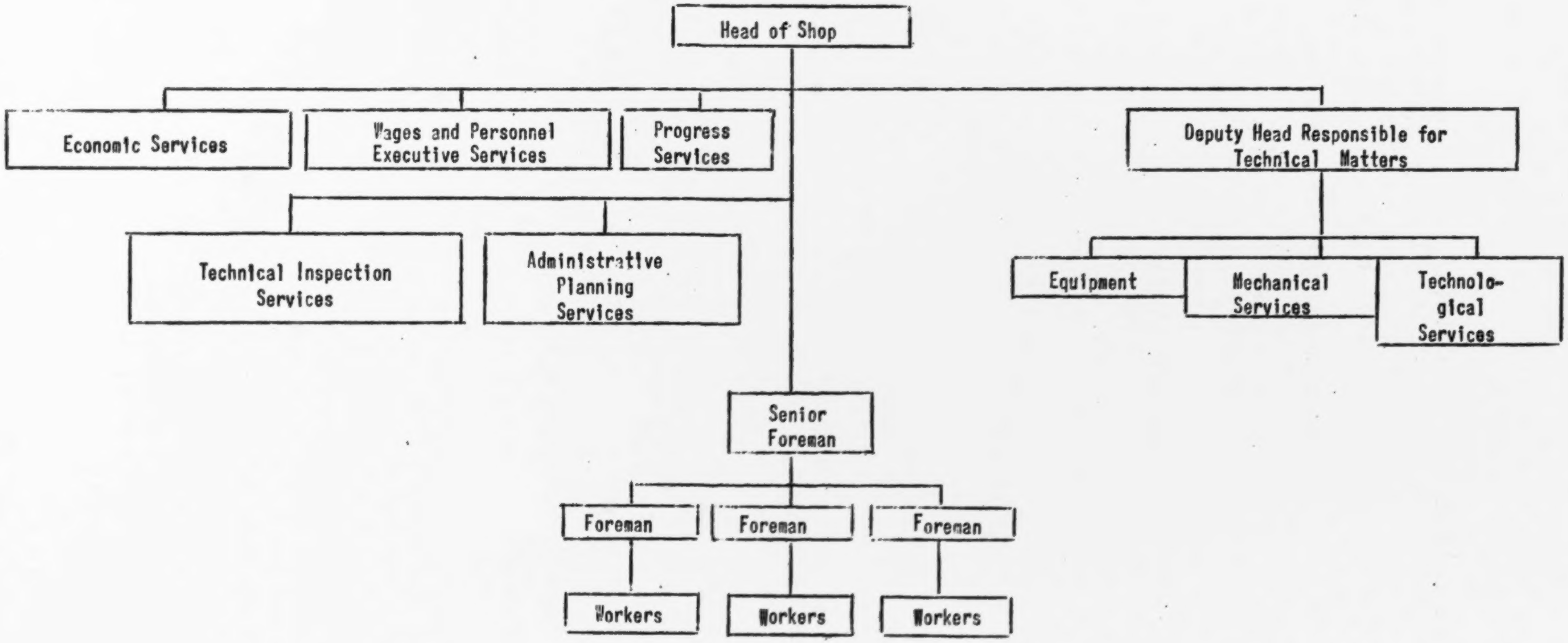
[1] See Diagram No. 3.

Diagram No. 3

Standard Organisation Scheme of Basic Production Shops

Factories Producing Agricultural Implements and Employing More than 5,000 Workers


Head of Shop
Economic Services
Wages and Personnel Executive Services
Progress Services
Deputy Head Responsible for Technical Matters
Technical Inspection Services
Administrative Planning Services
Equipment
Mechanical Services
Technolo-gical Services
Senior Foreman
Foreman
Foreman
Foreman
Workers
Workers
Workers

52. Following are the ways of determining norms for the number of staff engaged in factory and shop management according to their basic duties in factories producing agricultural implements:

Technologists. When determining the range of the work, attention is paid to the degree of complexity and novelty of the goods produced, shape, weight and quantity of the parts grouped according to technological complexity, degree of mass production.

A basic duty of technologists is to prepare, apply and constantly improve technological procedures. Therefore the method, of calculating the numbers required, starts with the number of technological operations which fall on average to the individual technologist.

The scientific research institute for technology in tractors and agricultural equipment manufacture has, on the basis of studies made in factories, evolved the following average norms relating to workload per technologist, taking into account the complexity of production:

Types of production	Quantity of technological operations falling to a single technologist
Production of tractors, motors, combines of all types, self-propelling cotton pickers	180-200
Production of sowing machines, ploughs, cultivators, cutters, mowers, grain-cleaning and other agricultural machines	230-250

However, there may be deviations from these average norms since the workload of a technologist serving various shops and sections depends upon the nature of the work and the complexity of the operations. Consequently the institute has worked out the following average norms for a technologist in relation to operations of varied complexity:

Nature and degree of complexity of operations	No. of operations per technologist
Complicated operations requiring adjustments and many instruments for parts of complicated design (flow lines of basic parts)	120-130
Operations of moderate complexity - all machine-tool operations where these require two or more instruments, complicated operations not involving adjustments	280-300
Simple operations - all bench operations requiring one instrument, preparatory work on presses, automatic operations	550-600

Foremen. When calculating the number required, the base figure is the average standard number of workers to one foreman. Attention is paid to the specialisation of the sections, the organisation of production, the nature of the work performed in the section and conditions of work in the section and shop as a whole. The average number of workers to a foreman in the production sections of factories producing tractors and agricultural equipment depends on the nature of the shop. The numbers of workers vary between 25 and 40.

In foundries and body-pressing shops there are more workers per foreman than in othershops as the sections specialised on technological lines perform work characterised by a limited variety of operations, the nomenclature of standard equipment and range of tools, the required degree of accuracy not being very great.

Norm-setters. When determining their numbers, attention is paid to the number of piece-rate workers; stability of range of products (spares, assemblies) and predominating type of production, quantity of norms (by calculation, experience or by single items); the existence of standard norms for different operations and work processes;. degree of mechanisation of work subject to norms; technical, operational and statistical accounting.

In tractor and agricultural implement factories the following norms are used for norm-setters:

Type of production	No. of piece-rate workers per norm-setter
Mass production and large-scale series production	160-180
Series production	120-130
Small-scale series and unitary production	70-80 per technological norm-setter

Economists. The number required per shop depends on the nature of production, the range of spares and number of workers in the shop. Also on the number of shops on basic production, the nature of the production processes and the complexity of goods produced.

53. The number of workers in administrative sections of the factory is determined in relation to the number of basic and auxiliary shops in such a way that one worker serves two to three shops.

(d) Junior Auxiliary Staff

54. The number of such workers is determined by starting from expanded service norms (cleaners - according to the number of square metres of premises; cloakroom attendants - according to the number of people using the cloakrooms; stokers - according to the number of furnaces); and also from the number of working places (watchmen, messengers, etc.).

(e) Worker-Trainees

55. The quota of trainees who are to receive practical training in production is set by the manpower training plan. In the labour plan the number of trainees is shown as an average listed item. To calculate the average listed number it is necessary to find the average period of training by occupation.

Example: In an undertaking the plan for the training of workers during the planning period details 280 workers of whom:

85 are turners with an average training period of four months;
170 " fitters " " " " " " three "
25 " millers " " " " " " three "
280 persons

To calculate the average listed number of trainees, it is necessary to multiply the required number of trainees in the given occupation by the number of months of training and divide by 12 - the number of months in a year. In the example the average listed number of trainee-turners is 28 (85 x 4 divided by 12).

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

IV. Forecasting Manpower Requirements

A. Manpower Assessment and Forecasting: General Features

1. Purpose of Manpower Estimates

1. Requirements for skilled and unskilled manpower of the entire national economy are assessed both for the coming year and for several years ahead. Forecasting manpower requirements is not carried out as an end in itself but is directed specifically to the preparation of plans to supply the required manpower to undertakings, development projects and organisations. Consequently the actual process of assessment and forecasting is not disassociated from activities involved in fixing sources of manpower, in attracting increased labour force participation and in training skilled workers. On the basis of calculations of additional manpower requirements, a general employment plan is prepared for each branch of economic activity, Republic, economic region, ministry and other authorities, and for the Soviet Union as whole.

2. Responsible Authorities

2. Manpower assessment and forecasting is carried out at the district, regional, republic and union levels by the respective planning bodies, *sovnarkhozes*, and ministries. Scientific research and social organisations also participate in this work.

3. Major Breakdown of Requirements

3. By means of assessment and forecasting manpower requirements are shown by branch of economic activity, e.g. industry, construction, agriculture, transport and communications; by Republic; and by *sovnarkhoz*. Plans to meet additional manpower requirements stem from the consideration of four categories of skill:

- unskilled workers, having no special preparation and performing work that requires no preliminary study;
- semi-skilled workers, whose special training can be completed in a matter of a few weeks to a few months, according to the particular job;
- skilled workers, having practical knowledge and proven ability in their occupation, with a background of general educational and technical training, whose training must be acquired over a long period of time;
- highly skilled workers, having knowledge and experience acquired over a number of years of study and further training, with several years' practical experience in their occupation and specialist branch.

4. Basis of Calculations

4. The total manpower requirements of undertakings, industrial, construction and other organisations for the period in question are estimated on the basis of production and construction plans, services to be supplied and projected increases in productivity. Current returns and forecast figures are used from undertakings, projects, organisations, sovnarkhozes, ministries and statistical and other authorities. The data are compiled into tabulated manpower records, discussed in Chapter II above.

5. Assessment of manpower requirements begins in the individual undertaking and in the planning organisations which are responsible for developing projects for the construction of industrial and other sites. Methods of making such estimates discussed in Chapter III above, indicated that attention is given to the following factors:

> the proposed volume of activities, based on the planned level of technical equipment;
>
> the proposed norms in any particular form of work;
>
> the proposed labour strength for jobs not remunerated on piece rates.

The number of personnel required for new industrial undertakings is determined on the basis of the manning tables in similar undertakings. Requirements are established for each year of a planning period in accordance with the new capacity and consequent expansion of the volume of activities.

6. Assessment of manpower for collective farms follows the general principles given above although for this branch of economic activity it is necessary to take different factors into consideration. Manpower requirements are calculated on the basis of planned levels of production, i.e. production in volume and value, area under cultivation, number of cattle, etc. Labour expenditure in man-days per hectare of cultivated land and per head of cattle is calculated by means of technical charts prepared for each crop and type of animal. These charts cover the technological standard of production and the level of mechanisation (utilisation of machinery by type and make, productivity, number of workers engaged in mechanised and manual jobs) and the time required for individual operations. When the direct and indirect and general labour-input figures have been determined, the average number of workers is calculated for each year of the planning period, using the index figure for the

number of days work contributed by collective farm workers each year. Peak manpower needs are met not only by the use of workers normally engaged in production for public consumption but also by temporary recruitment, e.g. students in the various levels of agricultural schools.

7. In order to organise transfer of population between regions and to improve organisation of training facilities, tabulated calculations are made in connection with the supply of manpower to the various Republics and regions, in relation to employment plans (see model: Table No. 9, Consolidated Table showing Manpower Requirements of the National Economy). In order to calculate how many extra workers are needed in any particular branch of the economy, the needs for the whole planning period are first determined. Additional requirements comprise extra manpower (the difference between projected manpower needs and current availability during the basic period) and manpower needed to replace losses (natural losses, departure in order to take up full-time studies, military service, etc.). Allowance is also made for replacement of workers leaving the region on termination of contract or for other reasons.

B. Appraisal of Requirements for Professional Personnel

1. Definition

8. This section deals with personnel whose functions require advanced or intermediate-level professional qualifications. Included in this category of workers are engineering and technical staff and salaried employees such as accountants, bank employees, etc. as well as persons with professional education performing manual operations on complex machinery. Persons performing professional functions but who do not actually possess advanced or intermediate level professional education are referred to as "practical" professional workers.

2. Planning Period

9. Calculation of the need for professional personnel is made for each group of specialists, with separate reference to advanced and secondary levels of skill. For each year of the planning period the additional professional requirements are calculated, consisting of the difference between requirements for that period and the numbers at present in operation, taking into account the need to replace probable losses. (See Table No. 8, Skilled Manpower Forecasting which shows requirements and sources from which they may be met.

10. Plans for training of professional workers are prepared on the basis of long term assessments. Consequently requirements for professional grades are assessed for longer periods than those underlying national economic planning. While economic plans cover a period of five to seven years, the requirements of professional workers need to be assessed for ten years in advance. When the national economic plan for the period 1959-1965 was drawn up, requirements of professional grades were assessed for the period up to and including 1970, thereby allowing for the period in which future workers were in training for employment in professional grades.

3. Responsible Authorities

11. Assessment of forward requirements of professional workers is made by undertakings, national economic councils, agricultural organs, building organisations, and planning and scientific and research institutes. The primary materials relating to requirements of professional workers are submitted together with assessments and reasons to the state planning authorities of the Union Republics of and to the union-level ministries and departments which study them carefully, make any appropriate alterations and then pass them on to GOSPLAN and the Ministry for Advanced and Intermediate-Level Professional Education of the U.S.S.R.

4. Factors Considered

12. General: Long-term requirements for professional personnel are determined on the basis of plans for the development of each branch of the national economy and culture and for improvements in the cultural and technical level and material welfare of the population. Assessment of needs begins with analysis of plans for each undertaking, institution and organisation, which makes it possible to show the main factors causing increase or decline in needs during the planning period. Such assessment is based on the latest methods for the administration of production and organisation of employment at undertakings, institutions and planning organisations and in scientific and research institutions and similar bodies. These principles are combined with study of the manpower strength in determining what posts should be filled by persons with professional qualifications.

13. Specific: Because of the importance of the appraisal of requirements for professional personnel and owing to the fact that the period covered must be relatively long, the specific factors considered in forecasting these requirements are discussed in greater detail below.

14. For each year in a planning period requirements are worked out, and training is included in economic plans. The following aspects are taken into consideration:

- plans to increase productive capacity, and number of undertakings, etc.;
- plans to increase mechanisation and automation and to install new machinery;
- changes in the technological methods of production according to branches of industry;
- planned changes in the character and range of products;
- the need to improve the organisation of industrial administration;
- plans to develop scientific and research organisations, designing offices, laboratories, etc.;
- plans to change the numerical proportions at the various levels of skill;
- changes in the division of responsibility between the posts of engineers, technicians and foremen;
- the numbers of engineers and technicians required in the various branches.

15. The essential factors affecting the need for professional personnel in existing undertakings and organisations may be divided into two groups, according to whether they call for an increase or a reduction in numbers.

16. Factors increasing the need for professional workers include:

- increased capacity resulting from reconstruction, expansion or introduction of new plant. Professional manpower requirements resulting from introduction of new capacity are determined on the basis of the manning tables for the new units, or in the absence of any such manning tables, on the basis of those for similar units already in existence;
- the introduction of the latest forms of machinery as a result of the installation of new technology or in connection with the increasingly complex functions of operation and management through the use of the most modern equipment and the widest application of scientific principles in production;

- expansion and development of the scientific and research activities of undertakings, the creation or expansion of works or departmental laboratories, design offices, experimental sections, technical departments, etc.;
- expansion of the range of production. Changes from mass to individual production may also increase the need for professionally qualified personnel;
- changes in the operating systems of undertakings working on a continuous process as a result of reduction in hours of work, and changes in the numbers of shifts in undertakings on a non-continuous basis. Such changes may affect the need for professional personnel of particular categories (e.g. co-ordinating supervisors, inspectors, heads of shifts).

17. Factors reducing the need for professional personnel include:

- expansion of specialisation and co-ordination, and combination of different industrial undertakings, particularly in the metal trades;
- improved organisation and management of undertakings and other departments, and simplification of administrative organisation within undertakings (centralised management, elimination of surplus structural departments and small sections, or expansion of such sections, introduction of centralised structure of administration in medium-sized and small-scale undertakings, combination of small building units and managements, liquidation of manpower surpluses, etc.);
- improved average levels of skills and changes in the composition of the workforce as a result of a greater influx of persons with general secondary education;
- introduction of mechanised administration (co-ordination of functions, use of computers, etc.), enabling the number of professional personnel employed in administrative posts, standard-setting and accountancy to be reduced.

18. The relative effect of each of the above factors depends on the long term plans for the development of undertakings and organisations and on the plans for organisational and technical measures.

5. Estimating Requirements

(a) Requirements of Undertakings in the Material Production Sphere

19. The use of model administrative schemes in general is described in Chapter III. Following is an elaboration of those aspects of particular importance in estimating requirements for professional personnel and establishing training plans to meet these requirements.

20. A model administrative scheme which has been standardised for undertakings, organisations and institutions, that have been classified into groups in each branch of economic activity, according to volume of production, number of employees and range of activities, provides not only the basis for determining the number of posts at the various levels in an undertaking but indicates also job specifications and qualification requirements for each post. For example, the model administrative scheme for a given coal mining undertaking within a specific group of mines in this branch of economic activity would include the following items:

Post	Qualifications	Job Specification
Coal Mine Number		
Director of Mine	Engineer	Working deposits of natural minerals
....	....	....
....	....	....
Chief Mechanic	Engineer	Electrical Engineering for mining purposes
....	....	....
....	....	....
Section Mechanic	Technician	-do-

21. A model administrative scheme or manpower staffing pattern may also be regarded as a series of ratios in which requirements for personnel in certain groups of occupations are related to those in other groups of occupations. Consequently, in the economic branches in the material production

sphere where the intermediate level technical personnel play a particularly important role certain ratios have been established. In industrial undertakings, in building organisations and in collective and state farms, the manning arrangement calls for two to four intermediate level professional grades to be employed for each advanced professional worker.

(b) Requirements in the Non-Material Production Sphere

22. In the economic branches in the non-material production sphere, requirements for professional personnel are based on plans for development of each branch in accordance with increases in the population and the number of persons to be served. Workload standards are established for each profession. For example, standards are fixed for numbers and types of professional workers in the following activities according to the following considerations:

23. In education. Increases in the numbers of persons undergoing training as a result of rises in the numbers of children of school age and expansion of general secondary education; changes in educational plans, the workload of teachers and the average size of classes.

- Calculation of requirements of teachers is determined primarily by the system of national education. The transition has taken place to general, compulsory eight-year education for all children, in both towns and rural areas, and general secondary education for a period of 11 years is also developing rapidly.

- There is also a broad-scale network of general educational schools for adults as well as vocational and technical schools. Requirements of teachers are also determined by the numbers of children of school age and the work-load for each teacher (calculated in teaching hours) and the size of classes.

- Calculation of requirements of teachers for general schools is made separately for classes one to four and for classes five to eleven. The average number of children in each class must not exceed 40, but the maximum is 35 in classes nine to eleven. In sparsely populated areas, schools are opened even when there are only 15 to 20 children of school age.

- In evening general schools for young industrial and agricultural workers, classes three to eight are organised when there are 20 to 25 pupils. In boarding schools the number of children in each class must not exceed 30.

- The number of classes of grades one to eleven throughout the country is calculated by dividing the total number of pupils by the average size of classes for each year of the planning period.

- The number of teachers for classes one to four is determined on the basis of calculation on the principle of one teacher for each full class. Requirements of teachers for classes five to eleven are calculated by multiplying the number of teaching hours per week according to the syllabus by the number of classes and dividing the total by the weekly workload of teachers. The weekly workload for classes five to eleven depends on the type of general school: for eight-year and secondary schools providing production training, the workload comprises 19 to 21 hours per week, and for teachers at evening schools for young industrial employees 15 hours per week. The number of teachers for boarding schools is based on the following calculation: two teachers for each class in grades one to seven and one teacher for each class in grades eight to eleven. Requirements for schools for children whose parents work staggered hours are calculated on the following basis: 1.5 teachers for each group in classes one to four and one teacher for each group in classes five to eight. The number of teachers for kindergartens is calculated on the principle of 2.1 teachers for each group.

24. In the health services. Increased measures to prevent disease; extra hospital and sanatorium beds, dispensaries and other medical establishments; changes in the workload for physicians and auxiliary medical personnel; expansion of the network of institutions for physical culture and sport; changes in the specialisation and organisational structure of health institutions.

- The manning standards are worked out and approved by the Ministry of Health of the U.S.S.R. On the basis of all-Union standards, the health organs in the Union Republics establish standards for each district (according to local characteristics). With a view to improved calculation of requirements of medical workers, assessment is made seperately for urban and rural areas.

- Requirements of medical workers for the system of health services are calculated on the basis of indices relating to development of the network of in-patient hospitals and further improvement in services by out-patient departments and ambulatory treatment. Calculation of requirements is made separately for ambulatory and out-patient departments (according to the number of physicians needed for every 10,000 inhabitants) and in-patient hospitals (according to the number of physicians required for every 100 hospital beds).

- For example, a town with 50,000 inhabitants is broken down into medical sections of 4,000 inhabitants each. There are thus 12 such sections. For out-patient treatment for each section the standard number of medical posts with advanced qualifications amounts to 6.3 (with a breakdown for individual specialist subjects). Thus, the town will require 75.6 physicians' posts (6.3 x 12). Calculation of numbers of physicians needed for in-patient hospitals is also based on the specialist branches (therapy, surgery) etc. The standards require that there should be 110 beds in the therapeutic section for 50,000 inhabitants (22 beds for every 10,000), and 95 beds in the surgical section (19 beds for every 10,000 inhabitants), etc. The number of posts in the therapeutic section is based on the standard of one physician to 22 beds and in the surgical section, one physician to 24 beds. Accordingly, five therapists $(\frac{110}{22})$ and four surgeons $(\frac{95}{19})$ are needed.

  Then calculation has to be made of requirements of physicians for general schools, kindergartens, etc. The basis of calculation here is one physician's post for 2,500 children at general schools, one post for every 400-600 children at kindergartens and one post for every 1,500 employed young people.

- Requirements of auxiliary workers (e.g. laboratory workers, radiographers) have to be calculated similarly.

25. In culture and the arts. Expansion in the network and volume of work in cultural and educational institutions in the field of the arts.

26. In the sciences and scientific services. Construction of new scientific institutions, organisation of new branches, bases, research factories and stations owing to the increased scale of scientific investigation, as well as expansion of existing facilities; planning and design work in connection with such plans; changes in the standard workload for scientific workers as a result of higher levels of skill and improved methods of scientific investigation.

6. Consideration of Additional Requirements

27. In working out plans for the development of advanced and intermediate-level professional education, calculation of additional, as opposed to over-all, manpower requirements is of particular importance. The over-all requirements of professional workers are constituted by the number to be employed in the national economy in the particular planning year. Additional requirements are constituted by the number needed for that year in addition to the probable number available already. Additional requirements are calculated from the numbers of professional workers necessary:

(a) to cover extra professional posts in accordance with plans for the development of undertakings, etc.;

(b) to make up loss of qualified and practical professional workers;

(c) to allow for partial replacement of practical workers by qualified grades (i.e. in order to replace persons occupying professional posts but not possessing the appropriate advanced or intermediate-level professional qualifications).

(a) New and Expanded Enterprises

28. Owing to the rapid rate of growth in both the material and non-material production spheres, the demand for professional grades with advanced and intermediate education is similarly increasing. Particular attention is being given to the requirements of professional personnel in new enterprises and existing ones that are expanding. Requirements for new industrial, construction, agricultural and communications undertakings and services are determined on the basis of manning tables (model administrative schemes) for similar undertakings or on the basis of technical plans and models for the new undertakings.

(b) Replacement of Losses

29. In estimating additional requirements to make up for losses, calculation covers persons retiring on pension on grounds of old age or disability, i.e., natural loss, as well as transfer for purposes of full-time study, departure for military service or for other reasons.

30. Probable loss of professional grades is calculated in accordance with figures for the last three to five years. These figures are determined by undertakings and economic councils following careful analysis of records and in the light of proposed activities for the planning period. Calculation is made separately for advanced and intermediate grades, since the percentage loss varies between the two. (Statistics show that loss of advanced professional grades amounts to 3 to 4 per cent. each year, and of intermediate grades 4 to 5 per cent.)

(c) Partial Replacement of "Practical" Professional Personnel

31. Various factors are taken into account in determining requirements of professional grades for the partial replacement of practical workers. Calculation is first made of the number of practical workers studying part-time in advanced and intermediate-level colleges for each year of study since a number of such workers graduate from advanced colleges after taking evening or correspondence courses. This results in a considerable decline in the numbers of "practical" workers within the total of professional grades. It is then decided what proportion of "practical" workers can be replaced by young professional grades who have completed day studies. On the basis of these methods of calculation, planning organs preparing the seven-year targets determine requirements of professional workers with advanced qualifications.

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

V. Full Employment and Rational Distribution of Manpower

A. Definition of Terms

1. Employed Persons

1. In the U.S.S.R. employed persons are defined as all persons working in order to receive the means of existence. Such means may be expressed in terms of wages, in cash or in kind, received from the State, which represents the interests of the whole society, or from an individual collective of commodity producers (for example, a collective farm), or from an individual (for example, a person hiring the services of a domestic servant). The means of existence may also be derived from other sources of remuneration such as income from work on one's own account without the use of hired labour (handicraft workers) or income received by unpaid family members within the framework of redistribution of the income of other family members, provided that such unpaid family members are studying, or are engaged in household occupations or the care of children, or both.

2. Thus certain terminological distinctions in interpretation and classification of employment as between capitalist countries and the U.S.S.R. are due primarily to the fact that there are no entrepreneurs in the U.S.S.R. A further distinction is that the term "employed persons" as used in the broad sense in the U.S.S.R. includes able-bodied persons engaged in household occupations and care of children irrespective of whether or not they help in work performed by other family members in return for remuneration. The term also includes able-bodied persons engaged in running private smallholdings (this generally being combined with household occupations) and full-time students who do not therefore receive any wages from regular employment.

2. Labour for Public Purposes[1]

3. Within the general framework of socially useful labour, a special distinction must be made with regard to labour for public purposes. Useful labour is labour for public purposes, but a substantial proportion of the employed population cannot yet be included within these terms, which is the case for persons engaged in domestic occupations, in the care of children or in running private smallholdings. All such persons come within the sphere of personal labour. The sphere of labour for public purposes covers wage earners and salaried employees of State and co-operative undertakings and institutions, collective farm workers and students.

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[1] Elsewhere also referred to as "labour for benefit of society", "labour for public benefit", etc.

B. Methods of Attaining Full Employment and Rational Utilisation of Manpower Resources

1. Based on General Economic Planning

4. By General State economic planning of employment (together with planning of other elements vital to economic development) and through increased employment levels in the sphere of socialised labour (i.e. labour for public purposes) are the methods practised in the U.S.S.R. to attain full employment and the rational utilisation of manpower resources. One of the basic features of employment planning is to work out the most suitable relationship between planned production volume, planned productivity standards and labour strength. Labour strength is directly dependent on the volume of production (the greater such volume, the more workers need to be employed) and in inverse proportion to productivity (the higher the degree of productivity, the less labour input is required for the same volume of production).

2. Increased Labour Force Participation

5. Under specific conditions the size and the structure of the labour force may play a great part in extending the volume of production. The necessity of expanding employment of the able-bodied population is of great importance for improvement in the living standards of the population. Therefore it is advantageous to achieve the greatest possible increase in employment of the population. This means that rapid increase in numbers of persons employed, throughout the economy (accompanied by efforts to achieve higher productivity) and at all stages of development of the Soviet economy, has been one of the major features in overcoming the problem of employment. But the highest growth rates were needed (and were possible in view of the manpower reserves then available) during the pre-war period.

3. Redistribution of Manpower

6. The absolute necessity and the practical significance of redistribution of manpower are due to two factors: first, and most important, the productivity of labour increases and the material and spiritual wealth of society expands, and secondly, full employment is maintained and the most rational structure of employment for each particular period is guaranteed.

7. For both pre-war and post-war development periods growth rates by far exceeding the natural population increase characterised the employment levels of wage earners and salaried employees. This relationship between expansion of employment and increase in manpower resources would be impossible without redistribution of manpower, in the first place, between the State sector (wage-earners and salaried employees in undertakings and institutions) and co-operative agriculture (collective farms) and, in the second place, between the sphere of socialised labour (all wage-earners and salaried employees, collective farm workers and other persons employed outside the sphere of personal labour) and the sphere of personal labour (all able-bodied persons engaged in domestic occupations and in running private small-holdings).

8. Increase in wage-earners and salaried employees: In both instances redistribution makes it possible to increase the numbers of wage-earners and salaried employees. However, there is this difference that in the first case this is done by means of reducing employment in collective farms, that is to say without reducing employment within the sphere of labour for public purposes, whereas in the second case this is achieved by reducing employment in domestic occupations and private smallholdings, which makes it possible to achieve a general increase in employment in the public sphere by transfer from the private sphere.

9. Production for Public Purposes: Assuming that all other conditions remain equal (with regard to productivity etc.), the economic development potential of a country is in direct proportion to the numbers of able-bodied persons contributing to production for public purposes. Conversely, the greater the proportion of persons not participating in such production and of persons whose activities are expressed in a small amount of time worked in the course of the year in the sphere of production for public purposes, the lower will be the level of utilisation of manpower resources and the greater the loss of potential production and the lower the rate of national development.

10. However, the actual degree of participation of the able-bodied population in production for public purposes and the proportion of distribution of such production between the various members of society are determined by various interdependent factors. Broadly speaking, the effect of these factors may be

expressed by saying that the higher the level of social productivity, the more manpower society can allocate to meeting the material welfare and cultural requirements of the population, that is to say for the non-productive sphere. Accordingly, the greater the development of the material welfare and cultural services sphere, the greater will be the proportion of persons previously engaged in the sphere of personal labour who, all other things being equal, can transfer to the public sphere and the more incentive there will be for them to make such a transfer.

C. Concept of Rational Distribution of Manpower

11. The purpose of rational distribution is to facilitate the most effective utilisation of manpower and material resources. The scope of rational distribution is not limited to the reallocation of workers from one geographic area to another but also encompasses planning for the maximum labour force participation by the able-bodied population, transfer of workers from personal employment to employment for public purposes, entrance of young workers into the employment market, the division of the labour force between material and non-material production spheres of activity, and within economic branches within each of these spheres, as well as the transfer of individual workers within enterprises and between enterprises.

12. The fullest and most efficient utilisation of manpower resources depends on the greatest employment of the able-bodied population combined with the highest level of productivity. The essential condition for any form of public production is the availability and utilisation of material and manpower resources. Expansion of production and higher increase rates depend on the most rational way of combining increased manpower with greater productivity. The level of productivity, the volume of production and the structure of production are the essential factors in distribution of manpower in the various economic branches. Effective manpower utilisation is the key to continuous high rates of economic development.

13. Planned rational utilisation of the country's manpower resources means:

- establishment of proportions in manpower distribution and utilisation that will enable optimum rates of expended economic reproduction to be achieved at the particular stage of economic and socio-cultural construction and enable the material and spiritual needs of the population to be met with the minimum expenditure of labour;

- satisfaction of manpower requirements of the whole economy and safeguarding of full employment for the whole able-bodied population.

14. These functions are interlinked, for planning of rational manpower distribution in the various branches of the economy is at the same time an essential condition for meeting the manpower needs of individual economic branches by means of redistribution. As the opportunity of achieving rapid economic development rates is created by means of more effective manpower distribution, full employment of the able-bodied population is likewise guaranteed.

15. Without planned distribution of manpower the national economy would suffer at the same time from a surplus of workers in some economic branches, accompanied by low productivity, and a shortage of workers in others, accompanied by suspended or limited production.

16. A shortage of manpower in some industries or regions cannot be overcome simply by recourse to surpluses available elsewhere. Surplus manpower must be reallocated in the light of the workers' willingness to move and their material interest in doing so.

17. Rational distribution of manpower resources is not a static activity. As a result of technical progress and changes in the economic structure constant improvement in the form and methods of manpower distribution is required to meet the problems of the changing manpower situation.

D. Tabulated Manpower Records: the Basic Instrument for Planning Rational Manpower Distribution

18. Tabulated manpower records by branches of economic activity, by geographic areas and by economic regions, as well as summarised tables at the national level are the key to the planned rational utilisation of manpower resources. They help establish the manpower requirements for each planning period as well as to discover manpower reserves, e.g.;

- Manpower reserves within industry, (made effective by reduction of technical stoppages, wasted time, over-rapid turnover and other causes of loss). Use of these reserves makes it possible to produce a greater output with the same number of personnel.

- Manpower reserves in the region (made effective by transferring persons occupied in private households and personal farms to more productive employment for society, placing pensioners in appropriate jobs, and finding work for underemployed members of the agricultural population between their seasonal peaks).

E. Aspects of Manpower Distribution

1. Employment of Women and Older Persons

19. Redistribution of manpower is conducted in various directions. The most prominent is through transfer of persons engaged in domestic occupations or in running private smallholdings to the sphere of production for the public benefit. As a result, housewives and other persons approximating to the category of "family members providing assistance" become wage-earners and salaried employees. In its results this process is equivalent to natural increase in the numbers of persons entering employment.

20. In order to enable women to participate in production, the State promotes wide-scale mechanisation and automation of production, it encourages women workers to improve their levels of culture and occupational skill, and it makes the business of housework and bringing up children easier by developing production of consumer goods and extending the network of restaurants and child-care institutions. Also the reduction of the hours of work to 41 per week has had a considerable effect in increasing the labour force participation rate. A further important aspect is that this process increases social productivity of labour, since productivity in domestic occupations and private smallholdings is far lower than in the public sphere.

21. An additional manpower source is the extension of employment of persons of pensionable age. As a result of higher life expectancy and certain other aspects of the population structure taking shape during the planning period, the numbers of older persons will by far exceed the population growth in respect of other ages. Thus, the proportion of persons of pensionable age is rising. It is not considered possible to raise the age at which workers are entitled to old-age protection, although the pensionable age (60 for men and 55 for women) is lower than in many other countries. However, regular improvement in living and working conditions and the improved health conditions of older persons argue in favour of extending the opportunities for such persons to participate in production for the public benefit, providing of course that the necessary conditions exist (in particular, shorter working day and week).

2. Distribution between Material and Non-Material Spheres of Production

22. It is believed by some that the degree of utilisation of manpower resources grows in proportion to the numbers of workers employed in the sphere of material production. This is considered true, however, only where higher productivity results in the possibility of an equivalent or even better supply of products created in the sphere of material production with less people employed in that sphere. But economical utilisation of manpower is similarly important in the sphere of social services, which generally means the non-productive sphere.

23. Proper distribution of employment between these two spheres is of great economic value since it affects the rates of economic development. Thus, if a considerable proportion of workers are diverted to the non-productive sphere, society may be deprived of a certain quantity of material benefits. Conversely, if a considerable number of manpower resources are turned to material production, thereby restricting opportunities for expansion of the non-productive sphere, this may affect economic development in succeeding years and disturb the normal process of long-term manpower replacement (by inhibiting improvement of the cultural and technical level of the workers or the development of health services, with the obvious consequences).

3. Distribution of Manpower within the Material Production Sphere

24. Rational distribution of manpower resources in material production requires the following: redistribution of manpower with a view to achieving higher productivity rates according to the various branches of employment (i.e. transfer from agriculture to non-agricultural branches); changes in the employment pattern in industrial production as a result of structural changes due to the development of more advanced branches, thereby aiding increased productivity of employment for public purposes and expansion of the public services sphere; reduction of labour input in the sphere of commerce, storage, transportation, etc.; and the most rational location of production throughout the country with a view to increasingly effective operation. These aims are attained primarily by increasing labour input in industry which is the key branch of production for the public benefit. While satisfying the wide demand for consumer items, industry also serves as a basis for the supply of machinery and materials to all branches of the national economy. Expansion of employment in industry results in rapid improvement in effective utilisation of manpower throughout society.

25. The progessive role of industry in creating the conditions for rational utilisation of society's entire manpower resources depends on the possibility of far-reaching changes in the employment pattern in industry itself. This is expressed in the more rapid increase rate in the labour strength in the engineering, metallurgical and chemical industries as well as in other capital goods industries. The process of reducing numbers employed in the extractive branches is carried out at the same time.

26. Reduction in the workforce in light industry, and in the food industry is also a most important element in changing the structure of industrial employment. This reflects a logical process in the industrialisation of the country and in expansion of employment in branches producing capital goods.

27. Industry is to an increasing extent taking on functions previously discharged by other branches, and primarily by construction and agriculture. This makes it possible to do the necessary work with a lower labour input. For example, the all-round development of the building materials industry means that building itself is more and more becoming a process of assembly of ready-made panels, blocks and other parts. In order to increase the volume of construction with wide-scale use of industrial methods, a relatively smaller number of employees is now required.

28. Together with industry one of the basic branches of material production is agriculture. The relationship between numbers employed in industry and in agriculture respectively reveals the effectiveness of utilisation of manpower resources and reflects the process of national industrialisation and of higher productivity in agriculture. Reduction of the agricultural work force is a vital element in the development of production for public purposes.

4. Redistribution from Agriculture to Non-Agriculture

29. The largest and most important aspect of redistribution of manpower resources remains between agriculture and non-agricultural branches. The agricultural labour force will decline considerably in the present 20-year period. The various methods applied in assessing numbers of agricultural workers forecast a decline of between 13 and 17 million. This will make it possible to provide extra manpower to non-agricultural branches and, in particular, the services. However, the release of workers from agriculture is not sufficient in itself to meet all additional manpower requirements. The absolute growth in

employment in non-agricultural branches will exceed the aggregate total of natural expansion of the able-bodied population and numbers released from agriculture. Total employment will increase by 40 per cent. during the period from 1960 to 1980 according to available assessment, while the able-bodied population level will increase by only 30 per cent. There is thus an absolute need to provide additional manpower through the introduction of fresh workers from the sphere of personal labour to the public sphere.

5. Territorial Redistribution of the Population

30. The elaboration of methods for the effective utilisation of manpower resources in the national economy depends inter alia on a full realisation of the effect of the manpower resources factor on economic development and location of industry. (See Appendix VIII, U.S.S.R. Density of Population per Square Kilometre). The movement of population from one geographic area to another is aimed at maximum economy in the use of manpower according to the following principles:

(a) Proper co-ordination of spheres of activity and branches of economic activity among the Union Republics, economic regions and towns, and the avoidance of the development of excessive population in large towns, together with accelerated development of small and medium-sized towns. The location chosen for new projects and undertakings may have different effects, in terms of employment opportunities and maximum utilisation of manpower. For instance, an excessively high concentration of heavy industry in one area or city will involve a substantial loss of available female labour, whereas unbalanced specialisation of an area in light or food industries will involve the underemployment of available male workers.

(b) "Complex" development - i.e. broadening, within the basic specialisation - of the economies of regions and industrial centres, enabling raw material and fuel resources to be more widely used with the aid of greater mechanisation, combination of industrial operations and co-operation between undertakings. This permits a rational use of the advantages of regional specialisation and makes it possible to secure maximum production of material goods with minimum waste of manpower. Specialisation must not lead to unbalanced economic development: if excessively narrow, it will inevitably lead to great loss of effort for the community, particularly by increasing long-distance transport.

(c) Equivalent economic and cultural development of the various regions, improvement of the over-all living conditions of the workers, and levelling of standards in that regard throughout the country. This creates more favourable conditions for the planned distribution and redistribution of human resources throughout the territory of the Union.

31. Improved territorial distribution of economic activities in the form of correct specialisation and complex development of regional economies is one of the main methods of effective manpower utilisation. This does not preclude, however, the full consideration of the influence of customs, geography, climate and other background conditions when decisions are made as to the feasibility of the movement of population from one geographic area to another.

32. The task of creating such conditions is met by means of accelerated construction of welfare facilities and housing and agricultural development at the same time as industrial undertakings are set up. In an area covering several thousand square miles between the Urals and Sakhalin, many industrial and cultural centres have already been built, and these act as a powerful magnet for the population of the western and central regions owing to the working and living conditions offered. Young people who do not fear difficulties willingly go to settle not only in centres such as those, but also in newly developed regions.

33. The problem of utilisation of manpower resources in small towns, in which a fairly large proportion of the population live (the figures for 1962 showed that 34,273,000 people or 15.6 per cent. of the total population lived in towns with less than 10,000 inhabitants), is one of the most pressing present problems in the rational distribution of manpower resources. It is solved by means of creating in such towns small but technically well-equipped branches or other departments of major industrial undertakings in nearby major industrial centres. Small towns situated in areas where agriculture is highly developed specialise in providing services for agriculture, such as maintenance of equipment and processing of locally-produced materials, including agricultural produce. This is a further way of ensuring more rational utilisation of manpower not employed in agriculture during seasonal slack periods.

6. Transfer of Redundant Workers

34. Far-reaching changes also occur in the redistribution of manpower in industry. Until quite recently, such redistribution as a result of mechanisation and automation did not generally go beyond the individual plant. Since the rapid expansion in production could not be achieved entirely through higher productivity, undertakings used workers released from one section of production to work in an expanding section. Now that increased productivity provides for the greater part of production increase, and it has been found inadvisable to expand industry further in many large towns, numerous industrial undertakings will gradually, and on a planned basis, reduce their actual labour strength as new technical measures are successfully introduced. This applies first and foremost to branches of industry at present still requiring a heavy labour input, such as the timber-processing industry, coal mining and the building materials industry.

35. In distinction to the manufacturing branches of industry, the extractive branches (coal, timber, etc.) will be enabled by means of comprehensive mechanisation and automation not only to redistribute manpower within and between individual undertakings, but also to release some of their labour force. This sets new social and economic tasks in the field of distribution and redistribution of manpower resources within the country.

36. Transfer, either within the undertaking or between undertakings, is a contractual form of manpower reallocation, intended to promote the introduction of new techniques, to improve the organisation of the plant as regards labour or production, or to improve the management. When a worker is transferred at the instance of the undertaking he is offered several forms of compensation or safeguards (maintenance of earnings for a specified period, a daily allowance, a cash grant, refund of removal costs etc.).

F. Continuity of Effort to Ensure Full Employment

37. The problem of full employment can never be considered as finally overcome since new tasks continually emerge which must be solved in order that every able-bodied person may consciously and whole-heartedly work to the full extent of his powers and not merely to satisfy his personal needs, but also in the interests of society at large. At the present time and even more in the coming period the following basic tasks are regarded as essential in solving the problem of full employment:

- Further organisational improvement in introducing additional manpower into the sphere of labour for the public benefit, in particular by improved organisation of measures to promote the interests and talents of young people reaching working age; the creation of more flexible ways of introducing into the public sector of employment persons willing and able to perform part-time work (housewives, young persons combining study at advanced and intermediate levels in professional colleges with employment in a branch of the economy, old-age pensioners, etc.);

- Development of accurate and rapid information (with the help of cybernetics) regarding additional manpower requirements and plans for release of persons already in employment. This system should be on a comprehensive basis, covering the whole of the economy, from individual undertakings to the broadest forms of combination of undertakings in order to ensure utilisation of such information at any point in the country, both by individual citizens and by planning organisations;

- Expansion of employment opportunity in seasonal slack periods for persons engaged in branches where there is a substantial seasonal fluctuation in production and manpower requirements (e.g. agricultural workers);

- Development of the system of preliminary vocational training for workers available for release from their present employment as a result of plans for comprehensive mechanisation and automation, in such a manner as to ensure their smooth transfer on the basis of material incentive and unrestricted free will.

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PART TWO - PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

VI. Meeting Skilled Manpower Requirements Through Education and Training

A. Summary of Sources of Skilled Manpower

1. On the basis of estimates of additional manpower requirements[1], a general employment plan is prepared for each branch of economic activity, Republic, economic region, ministry and other authorities and for the Soviet Union as a whole. To meet manpower requirements at the various levels of skill, the authorities fix the sources of additional manpower, methods of increasing labour force participation, and measures to increase the numbers of skilled workers. Following are the principal sources of supply of skilled workers, each of which has a part to play in ensuring a steady labour inflow:

- transfer between the various branches of the economy, different regions and spheres of effort;
- vocational and technical colleges;
- skilled training in secondary schools with industrial courses;
- in-plant skilled training.

2. Methods of rational distribution of manpower is discussed in Chapter V above; while the provision of vocational and technical education and planning to meet the specific requirements for professional personnel follows.

B. Types of Education and Vocational Training

3. Following is a short summary description of the principal forms of education and training by which workers gain occupational and professional skills and knowledge.[2]

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[1] The difference between projected manpower needs and current availability during the base period and the manpower required to replace losses (natural losses, departures to take up full-time studies, military service, etc.).

[2] See also Report on Inter-Regional Study Tour on Vocational Training in the U.S.S.R., I.L.O. Geneva 1962, ILO/TAP/INT/R.5, Chapter II, Education and Vocational Training in the U.S.S.R. and Appendix III, Diagram of Educational Structure.

1. Training of Young Persons

4. Great emphasis is laid on the training of young persons and the proper utilisation of their labour. Technical progress in all branches of the economy places increasing demands on workers' levels of skills. In this connection the development of vocational and technical training of young persons has a particularly important part to play. The transformation of the educational system in general schools has now been completed throughout the U.S.S.R.[1] These schools now organise general production training. The main task of the school is to prepare pupils for life and for socially valuable labour, and to produce well-educated persons with a good knowledge of basic science.

5. There is a balanced system of education and vocational and technical instruction for young persons. For this purpose there is a general, compulsory eight-year school programme and complete secondary education beginning at the age of 15 or 16 which is combined with production training.

6. The organisation of vocational training for pupils in the ninth, tenth and eleventh classes of general schools has been a most important step in the education of young people and in expanding skilled manpower training. Training is provided under special programmes for each particular trade in accordance with the skilled manpower requirements of undertakings and organisations in the particular region. Special workshops and laboratories are provided in schools for this purpose, apart from the organisation of training for pupils in the actual undertakings.

7. Students in the upper classes of the secondary schools are placed in "school jobs" so that they may receive vocational training and acquire practice in industry as part of their education. They receive wages for the work done during this time on the same basis as employees of the undertaking and with the same rates of pay, but are not counted as members of the personnel. In this way students receive vocational training as well as general education. After completing the period of practice and the training programme, the student is tested. If he obtains good results, the testing board of the undertaking certifies him as having reached the appropriate grade in the particular occupation.

8. Young persons who have completed their eight-year schooling and go to work in one of the branches of the national economy receive general education and increase their vocational skills at evening schools for young industrial and agricultural workers, or at secondary level, general polytechnic schools providing production training.

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[1] In accordance with the "Practical Education" Act of 1958 arrangements are made for pupils of the general schools to receive practical experience at school workshops or combined school and production workshops.

9. The preparation of technically trained skilled workers for industry and agriculture is also provided in vocational and technical schools, which take young persons after they finish their compulsory eight years' schooling.

2. Vocational and Technical Colleges

10. The vocational and technical colleges turn out skilled workers in complex occupations and trades, particularly in new technical trades and in the operation of machinery, but also in broader trades calling for a considerable period of training and substantial theoretical knowledge.

3. Training Within Undertakings

11. Training in non-complex occupations and intermediate level skills is provided at the workplace, generally within the framework of actual production at each undertaking, etc. There are three methods: by group, individually, or through courses.

12. Under the group method, industrial training is provided in premises specially set aside for this purpose. Groups consist of not less than ten new workers following the same trade. They have an instructor, who is responsible for their level of training and the quality of their work within an appointed time. This method is used for maintenance, assembly and similar departments where workers operate in groups. Depending on the conditions of production, trainees may either form part of a production team in which they will receive training under the supervision of the foreman or the most skilled member of the team, or they may form special trainee teams consisting of three to eight workers.

13. The individual method is used where there are not enough trainees of the same trade to make up a complete group, or where workers have to be specially trained to use complex special-purpose machinery. The worker is attached to a skilled worker or a member of the engineering and technical personnel who combines the duties of instruction with his normal work.

14. Skilled instructors teach trainees correct and rapid working methods in the use of equipment, the proper organisation of working space and time, how to avoid wastage of materials or damage to equipment, how to eliminate substandard or unfinished work and how to fulfil production norms while producing top-quality goods.

15. The speed and precision of trainees' work is tested not less than twice each month. Both in the group method and under the individual system, theoretical instruction is combined with practical training. Special programmes are drawn up for both industrial and theoretical in-plant training. The preparation, approval and distribution of instructional plans, programmes and other teaching aids is the responsibility of the state committee

for vocational and technical education, which is assisted by several other organisations.

16. Industrial training programmes for new workers include the following basic elements:

- instruction in safety techniques and information on production;
- practical instruction on equipment, basic operations and forms of work in the particular occupation, on the latest methods of using equipment and the application of technical processes;
- independent work at an established working place in order to improve practical skills;
- tests of skill.

17. The theoretical programme covers the following elements:

- basic information on production and organisation of working space;
- safety techniques and occupational hygiene;
- basic characteristics and uses of materials;
- reading basic plans and production systems;
- arrangement of modern equipment (machines, machine tools and production units), rules and methods of use;
- the technological process and advanced working methods;
- basic information on organisation of work and technical standard-setting.

18. Industrial and theoretical training programmes are applied in uniform manner for training in any particular trade or profession, with a six-month training period. During training, workers receive wages in accordance with the duration of training and the results of their work.

19. In addition, there are also systems for further training in undertakings, etc., in specially organised short courses and schools. These are of four types:

(1) technical industrial courses in which workers increase their technical knowledge and their production skills in a particular trade, following the experience of advanced workers. Instruction is modelled on the requirements of occupational descriptions and training programmes for higher levels of skills;

(2) all-round courses providing instruction in new technical and technological aspects, new methods of mechanisation and automation of production processes and inspection, and instruction on new raw materials and products. The duration of such courses depends on the particular purpose and does not normally exceed three months;

(3) schools for instruction in advanced working methods, where instruction is given on the basis of methods used by advanced workers who have achieved high productivity, have produced top-quality goods and have achieved economy in materials;

(4) courses in additional, related and combined occupations, with a view to providing for more rational utilisation of equipment and working time.

20. There is thus a wide range of training methods in which both theoretical and industrial studies are included. Courses and schools are attended both by workers already in employment and by newcomers who wish to increase their skills, provided that they already have the necessary general educational level of training. Instructors are allocated by undertakings. During such courses and schools, the workers continue to receive their wages.

4. Advanced and Intermediate Level Professional Colleges

21. Under the national educational system, manpower training in advanced and intermediate level professional colleges is carried out in day sections for full-time students and in evening and correspondence sections for students who remain in employment.

C. Training Costs and Incentives

22. All training of professional, engineering and technical workers, and of skilled grades in vocational technical colleges and in secondary schools with industrial sections throughout the Soviet Union is conducted by means of state budget funds, while undertakings pay for in-plant training of workers.

23. Young persons receiving professional or specialist training at any of the above institutions are not required to pay for tuition.

24. The expenditure involved in the above training facilities is composed of the following items:

- capital construction and maintenance of premises and installations (lecture rooms, workshops, laboratories, hostels and offices);
- acquisition and maintenance of equipment;
- teachers' and instructors' salaries;
- food and clothing for students (in vocational and technical colleges students receive free food, clothing, books and educational materials, being fully cared for by the State throughout the period of training);
- payment of grants to students. Three-quarters of students at advanced and intermediate professional colleges receive government grants. All students coming from other towns are provided with hostel accommodation.

25. In-plant training of workers is paid for by the undertaking, project or organisation concerned. The cost of such training, whether by individual or group methods or through short courses and schools, is composed of the following elements:

- instructors' wages;
- teachers' salaries;
- wages for trainees during the period of training.

D. Organisation of Planning for the Training of Professional Grades

1. Responsible Authorities

26. Plans for the development of advanced and intermediate level professional education are drafted in each Union Republic. In 1960 the administration of professional colleges was transferred to the Republics instead of being under all-Union direction. Ministries were set up in the major Republics and committees in the smaller Republics for the administration of advanced and intermediate level education. Only a small number of colleges remain subject to administration by all-Union ministries. Thus, transport colleges come under the Ministry of Transport of the U.S.S.R., communications colleges under the Ministry of Communications of the U.S.S.R., and colleges for the training of professional workers for the consumer co-operative systems under the Central Co-operative Union, and so on.

27. The Ministry for Advanced and Intermediate Level Education of the U.S.S.R. directs the training of professional workers throughout the country through administrative offices in the Union Republics, ministries and departments. The ministries and committees concerned with advanced and intermediate level education in the individual Union Republics prepare training plans in the light of manpower requirements in that particular Republic and for use elsewhere in the U.S.S.R. Co-ordination of plans with regard to numbers admitted and numbers completing studies is the responsibility of the planning authorities in the Republics on the basis of long-term projections for economic and cultural development. Over-all co-ordination is carried out by GOSPLAN.

28. The basic elements in these plans at the various levels are approved by the Council of Ministers of the U.S.S.R. in annual economic plans. The councils of ministers of Union Republics approve training plans at the Republic level on the basis of general state planning targets.

The councils of ministers of Union Republics and the ministries and departments are entitled, where necessary, and with the agreement of GOSPLAN to change plans regarding numbers to be admitted and numbers completing studies that have been laid down in national economic planning targets, any additional expenditure being met from the budget of the Union Republic or all-Union ministry or department. The ministries and committees at Republic level and the ministries and departments at Union level prepare and approve plans for training in each individual college.

2. Factors in Planning

29. Plans for the development of professional education are prepared in accordance with the following factors, and on a separate basis for day, evening and correspondence courses:

1. numbers admitted to professional colleges;

2. numbers completing studies;

3. numbers of students at professional colleges.

3. Unified List of Professional Categories

30. Plans for the number of professional students to be admitted or completing studies are established on the basis of a unified list of categories drawn up by the Ministry of Advanced and Intermediate Level Education of the U.S.S.R. This list aims at providing the fullest satisfaction for the manpower needs of those branches dealing with material production as well as of institutions and bodies concerned with education, science, culture, the health services, trade and administration. There are 22 different categories, as follows:

1. geology and prospecting for natural resources;
2. development of natural resources;
3. power supplies;
4. metallurgy;
5. engineering;
6. electrical engineering;
7. radio and communications;
8. chemical technology;
9. timber, cellulose and paper;
10. food technology;
11. staple consumer items;
12. construction;
13. geodesy and cartography;
14. hydrology and meteorology;
15. agriculture and forestry;
16. transport;
17. economics;
18. law;
19. health services and physical culture;
20. university teaching;
21 institutes of education and libraries;
22. arts.

31. Plans for the training and distribution of intermediate level professional grades are also based on a somewhat longer list of categories.[1]

4. Enrolment Plan

32. On the basis of the assessment of the manpower situation and the forecasting of future requirements for advanced and intermediate grade professional workers, each year's plan states how many new students will have to be admitted to advanced colleges. In working out the enrolment plan allowance is made for those failing to complete their studies. At daytime sections it has been found over the course of many years that between 10 and 12 per cent. admitted for the first course will fall out subsequently. In 1960, 229,000 students graduated from day sections, whereas the number admitted for the first course in 1955 amounted to 257,000, so that 11 per cent. did not complete their studies.

33. On the basis of figures relating to admission of new students, duration of studies, numbers not completing studies in each year and numbers graduating, calculation is made of numbers studying at advanced colleges for each year of the planning period. As an example, from the planning figures for 1963: assuming that records for the beginning of the 1962-63 scholastic year showed that there were one million students at advanced colleges, the

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[1] Vocational and technical training is at present provided in 500 occupations, and advanced and intermediate level professional colleges cater for 600 different subjects.

plan for 1963-64 calls for a further 300,000 to be admitted. The numbers to graduate in 1963-64 amount to 200,000, and the probable number not completing studies will amount to 20,000 (2 per cent.). The number of students at the beginning of the 1963-64 year will therefore total 1,080,000 (1,000,000 + 300,000 - 200,000 - 20,000).

5. Specific Cost Items

34. In addition to calculating the numbers to be trained plans also cover expansion of the material basis of advanced and intermediate level professional colleges. They deal with the volume of state capital investment, the establishment of teaching premises and laboratories and the building of hostels. An important aspect of development planning is planning of expenditure from the state budget in respect of grants to students at advanced and intermediate level colleges and payment of teachers' salaries as well as maintenance costs. Planning also covers increases in the teaching and auxiliary staff. In order to ensure the supply of educational materials the Ministry for Advanced and Intermediate Level Professional Education of the U.S.S.R. prepares annual plans for publication of text books, teaching aids and other materials and for the issue of educational films and other visual aids.

6. Co-ordination with Over-all Planning

35. The volume of training of professional grades in annual and long-term plans is linked with the country's economic potential. Consequently, the plans for training all professional workers must be co-ordinated with the state budget and the plan for capital investment which covers the means for the expansion of the material, technical and educational basis of colleges and the construction of hostels. The planned admission of students is also co-ordinated with tabulated manpower balance sheets.

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PART TWO: PROCEDURES IN MANPOWER ASSESSMENT, PLANNING AND UTILISATION

VII. Employment Placement

A. Methods of Organised Recruitment and Resettlement (ORGNABOR)

1. Redistribution of manpower from densely populated regions to developing regions which are less densely populated is carried out according to an organised system. The methods of supplying additional manpower requirements are: organised recruitment, appeals to young persons, and the allocation of workers completing their studies either at vocational and technical schools or at general schools.

1. Historical Development

2. In the 1930s the main kinds of planned manpower reallocation were: placement of persons leaving educational institutions, and organised recruitment for employment in industry on the basis of agreements with the collective farms. The object of this latter was to draw into new branches of industrial employment rural manpower which had been made surplus as a result of the collectivisation of agriculture and the increased productivity of agricultural labour.

3. With the development of large-scale industry and the establishment of permanent staffs of workers in the main branches of economic activity as well as the rapid expansion of urban population, the composition of manpower resources covered by organised recruitment has changed substantially. In the post-war period organised recruitment became a form of territorial redistribution of wage-earners and salaried employees for the most part, and of incorporation in public production of persons previously engaged in household occupations and in running private smallholdings, as well as young persons previously not in employment. Also the completion of major construction projects is a further source for the redistribution of manpower.

2. Present Organisation of ORGNABOR

4. Organised manpower recruitment is the responsibility of "The Administration for Organised Recruitment and Resettlement of Workers" (ORGNABOR) which has central resettlement and recruitment offices attached to the Council of Ministers in each Union Republic. These have local sections in the various regions, districts and autonomous republics, coming both under the central administration and the regional, district and republic authorities. The various regions have their own officers and inspectors in charge of resettlement and organised recruitment.

5. The functions of the central administrations and their local offices are as follows:-

- to carry out organised recruitment for permanent employment in industry, construction, transport or seasonal employment;
- in conjunction with the Planning Committee and other bodies concerned, to draft plans for organised recruitment and to submit these for confirmation by the council of ministers of the Union republic concerned;
- to study the availability of manpower resources in towns and rural areas, and, in conjunction with the Planning Committee of the Republic, to determine which regions have surplus manpower resources and which regions require extra manpower, and to establish quotas for resettlement and organised recruitment;
- on the basis of the returns submitted by economic councils, ministries and authorities and in the light of the manpower requirements of undertakings and building projects and their ability to place further workers, to establish quarterly quotas for organised recruitment in accordance with annual plans.

At the same time strict attention is paid to the utilisation of all manpower reserves within the region concerned.

3. Programme Planning and Approval

6. On the basis of assessments of additional manpower requirements submitted by undertakings, building projects and national economic councils, GOSPLAN determines their annual manpower requirements and the possibility of meeting such requirements through recruitment, either within the particular republic or from outside, through the engagement of workers by the actual undertakings or building projects concerned, and through other means. The numbers of workers to be directed to undertakings within the framework of organised recruitment from other Union Republics are confirmed by the Government of the U.S.S.R. together with the national economic plan. Manpower transfers within the same republic are confirmed by the council of ministers of that republic.

4. Public Information

7. The population of the country is widely informed by means of the press and radio about economic regions, industrial undertakings and new construction projects that require extra manpower, and about working and living conditions and the benefits offered to persons going to work there.

5. Incentives and Contracts

8. Organised recruitment is conducted on strictly voluntary principles. Since there is no unemployment, people can find work where they normally live. However, persons wishing to go to work in a new area are offered benefits and advantages by the State. Persons placed in employment under the organised recruitment scheme receive higher wages and, in distant areas or in regions where the climate is particularly hard, they receive double the normal wage rates.

9. Workers wishing to go to another area within the framework of the organised recruitment scheme sign an employment contract with the regional officers, under which they undertake to work for a specified period at the undertaking or building project concerned (from six months in the case of seasonal work to five years in the far north). The greatest number of workers sign employment contracts for two years.

10. The agency in recruiting workers according to the plan, arranges for their medical examination, if necessary, and arranges to bring them to the new work place. It also checks on the readiness of the undertaking to take over the workers, to provide suitable employment for them and to meet their housing and other social requirements. The agency is entitled to refuse to send workers to an undertaking which is not ready for the above procedures.

11. Every person who signs an employment contract receives a lump-sum cash benefit, and a daily allowance for travel time to the place of work. Both the worker and his family members receive free travel and baggage warrants.

12. The undertaking or construction project is required to provide resettled workers with work in accordance with their qualifications, hostel accommodation or, in the case of married workers, separate quarters. The worker also receives any special clothing or equipment required.

13. The worker has facilities to increase his skills and to continue studies. Thus, on the site of the Bratskaya power station there are 17 general schools, and a training centre providing instruction in 64 different occupations. Workers wishing to receive advanced education are assisted by an advisory office coming under the All-Union Correspondence Institute for Engineering and Construction. A varied network of schools operates at other major construction sites.

14. After completing the agreed period of employment, workers may remain at the undertaking for permanent employment or they may return to their original place of residence, in which case their travel expenses are covered by the undertaking.

6. Agricultural Resettlement

(a) Advanced Planning

15. Within the framework of the programme and procedures described above, special mention is made of the work of resettling agricultural workers. This activity is aimed primarily at supplementing the manpower resources of collective farms and state farms in large areas with promising prospects for all-round development of agricultural production, but suffering from a shortage of manpower. The particular characteristic of this form of territorial redistribution of manpower is that it affects whole families composed both of able-bodied workers and of children and older persons. Not only the family is moved but all their property and domestic animals.

16. Reception of settlers and assistance in their establishment are matters that are decided by general meetings of collective farm workers. The collective farms and state farms supply the territorial offices for agricultural production and procurement and the regional executive committees with information regarding their additional manpower needs and state what will be done in order to assist settlers in their establishment. All of this information is then studied in the districts, regions and autonomous republics by planning committees in conjunction with agricultural and resettlement authorities and then submitted to the Planning Committee of the particular republic, together with the draft economic plans. The information is co-ordinated with manpower needs as revealed by tabulated manpower tables, with proposed further development of agricultural branches (availability of undeveloped fertile land, pasture land etc.) and with facilities available in each farm to establish settlers in proper manner.

17. Agricultural resettlement plans drafted in this manner are confirmed by the Council of Ministers of the U.S.S.R. (in the case of movement between different republics) and by the councils of ministers of Union Republics (for movement within the same republic). These plans are an integral element in national economic planning. When agricultural resettlement plans are co-ordinated particular attention is paid to achieving maximum economic advantage from resettlement and to ensuring conditions that will encourage families to remain permanently in their new place of settlement.

(b) Nature of Groups

18. For this purpose, it is generally recommended that large compact groups should be resettled, so that they can make a definite impact on the improvement of agricultural production. Special attention is paid to regional affiliations and to similarity of climatic conditions, in order that settlers may retain national or local traditions and feel encouraged to remain permanently in their new place of settlement.

19. The success of resettlement depends to a great extent on the persons selected, so that great emphasis is laid on selection of families. Thus, the local resettlement offices carry out widescale campaigns for information and explanation through press, radio, television etc. They provide information on the economy, the natural conditions and the climate in resettlement areas, as well as on conditions and benefits offered to settlers. Earlier settlers from the same area participate in this work. When a number of persons express interest in resettlement, they delegate representatives to go to the region concerned and acquaint themselves with working and living conditions there.

20. Whole families volunteering for resettlement are transported according to an organised scheme in special groups. They are met on the spot by the leading representatives of the region or of the farm concerned and then conducted to their new places of settlement.

(c) Material Incentives

21. Material incentives and provision of satisfactory conditions of work, housing and living are of great importance. Settlers are granted various benefits and advantages by the State and the collectives receiving them. These benefits are payable before settlers leave their original place of residence. Collective farm workers or state farm workers wishing to resettle in a new area are paid half the lump-sum cash benefit and are helped to sell their immovable property.

22. The State bears all expenditure involved in resettlement. Both settlers and their family members are paid a lump-sum cash benefit which increases proportionately with the distance involved. Travelling expenses and the cost of moving property or domestic animals by road, rail or waterway are borne entirely by the State.

23. However, the most substantial benefits are received at the new place of settlement. Plots are allotted within the farm area in accordance with the standard dimensions for that locality, and help is given in planting vegetable gardens. If the settler arrives in the summer he is allotted a plot that has already been planted on his behalf. Collective and state farms generally provide settlers with small livestock and poultry either free of charge or on very favourable terms. All able-bodied settlers are given productive work for public consumption purposes, in accordance with their particular qualifications.

24. Settlers' families are granted credit on favourable terms for the construction of individual dwellings on their allotted plot. Depending on the particular region, between 35 and 50 per cent. of this credit is reimbursed by the State, and the balance of 65 to 50 per cent. is repaid by the settler over a ten-year period beginning three years after his installation.

25. Settlers in wooded areas are allotted a felling plot for the purpose of building their own house, without any charge being made. In addition, settlers in areas without forests are provided with the necessary timber and wooden materials. They are enabled by means of special funds to purchase at State wholesale prices the prefabricated parts for a standard individual house, tiles, cement, nails, window panes and other building materials.

26. Families moving to state farms are provided on request with accommodation in houses built under the state housing construction plan. With this form of organisation, almost all settlers' families have their own dwelling by the end of their first year.

B. Supplementary Manpower Distribution Systems

27. Because ORGNABOR does not have sufficient regard for the occupational qualifications of the workers moved there are supplementary state systems, parallel to ORGNABOR for the allocation of young professional workers who have graduated from the universities and technical colleges and for young wage earners as they pass out of the vocational and other schools.

1. Placement of Young Persons Completing Studies

(a) Advanced Planning

28. Both skilled manpower training and placement are the subject of advanced consideration in state planning for the development of the national economy. Proper distribution of the network of schools and decisions concerning the numbers of workers to be trained require thorough knowledge of skilled manpower requirements. But it is not enough just to organise training; placement must also be ensured, and that is why skilled manpower requirements are assessed within the planning framework.

29. The national economic councils, the ministries and other authorities assess additional skilled manpower requirements for the various branches of the national economy (industry, construction, transport) on the basis of the returns submitted by undertakings. They take into account both the present skilled labour strength and the additional requirements in connection with expansion of production, as well as the need to replace workers leaving for purposes of study, military service, retirement or other causes.

30. Assessment is made of the need for further skilled workers, to be met from among persons completing studies at vocational and technical schools, and at general secondary schools with production training, from among persons trained within industry and from other sources. Such assessment is treated as a definite order by industry and construction projects for the training of further manpower. On the basis of these requirements training of skilled workers in vocational and technical schools and of young persons in general secondary schools is then planned.

31. Highly intricate calculation is needed in planning the training of the additional numbers of school leavers in the various branches. It is established how many persons are completing eight years' schooling, how many are going on to the ninth class and how many are going into vocational and technical schools or to work in undertakings and institutions. At the same time it is seen how many persons are completing the eleventh class at secondary schools and entering advanced colleges, intermediate technical colleges or vocational and technical schools. It is then possible to estimate how many young people have to be placed in employment. A similar assessment is carried out in the case of persons completing studies at vocational and technical schools.

32. Details regarding numbers and occupations of trainees thereby ascertained are compared with the declared manpower requirements of industry. If one particular region cannot offer employment to everyone in a particular specialist branch and other regions need manpower the transfer of some of the skilled workers concerned is then planned. This applies particularly to persons leaving vocational and technical schools. Persons leaving schools with production training are generally placed in local jobs.

33. Annual plans for the placement of skilled workers are confirmed by the Council of Ministers of the U.S.S.R. and the council of ministers of each Union Republic for each year of the planning period, together with the national economic development plan. This plan is prepared in order to meet the need to satisfy current skilled manpower requirements, primarily on the part of the principal branches of heavy industry, but also on the part of regions where there is a shortage of skilled manpower.

(b) Reserved Places

34. In order to guarantee placement of all young persons, whether they have specialist training or not, the Councils of Ministers of the Union and autonomous Republics, and the Executive Committees of the district, region and municipal Councils of Deputies, together with the national economic councils and the local vocational and technical education authorities, are recommended to arrange for all undertakings, construction projects and organisations in their territory to reserve places for the employment and production training of young persons who have completed secondary education and younger school leavers, in accordance with labour planning. The local councils of workers' deputies form special youth placement committees in accordance with the plan for placement of persons leaving secondary schools with production training and general eight-year compulsory schools. Undertakings are required to comply with instructions by such committees to engage designated workers.

(c) Utilisation

35. However, this is not all that is done in the way of placement of young persons. The special inspectorate of the central vocational and technical education administration systematically ensures that every young worker is properly used at the undertaking in accordance with his vocational training, that there are full facilities for acquiring further skills and that normal conditions of housing and social facilities are guaranteed.

(d) Arrangements

36. School leavers are placed only in such undertakings, building projects, state farms and organisations as are able to receive them and can offer young workers the opportunity to work in accordance with their acquired skills. Decent communal housing facilities must be provided for young workers sent to other regions and therefore requiring accommodation, as well as for former inmates of children's homes. It is forbidden to send school leavers to a workplace that cannot provide such facilities. In such cases plans are revised and the workers are sent to other workplaces that need manpower and have prepared the proper facilities to receive young workers. Expenditure involved in transfer of workers to a new workplace outside their normal place of residence is borne by the undertaking or organisation receiving them.

37. Directors of economic authorities, undertakings and construction projects are required to receive young workers within one week and to provide for their registration and assignment to working places within five days. Young workers are then given a period of leave ranging from two weeks to a month depending on the duration and type of training required, and they are paid the standard wage rate by the undertaking during that period of training. They are also paid an advance in respect of purchase of installation requirements, which is then deducted from their wages over a six-month period. Time spent in training in schools is included in the worker's continuous employment period. Directors of undertakings, projects and other economic organisations are forbidden to pay young workers less than the standard wage rate awarded them by examining commissions.

2. Placement of Professional Workers

38. Particular attention is devoted to plans for the distribution of professional workers graduating from college. This illustrates the determination that every graduate should be provided with work in accordance with his particular qualifications. It also allows rational distribution of skilled grades in accordance with long-term development in particular branches.

39. All young professional graduates are provided with work in their particular branch in order to consolidate the theoretical knowledge acquired and to provide necessary practical experience. The appointment of young professional workers is made not more than three months after graduation by a special board which includes representatives of public associations.

For three years after completing their studies they must not be employed by directors of undertakings etc. in supervising jobs on their administrative staff, nor may they be transferred to work that is not connected with their particular qualifications or dismissed without the approval of the ministry, department or national economic council concerned. Plans for distribution of young professional workers are prepared and approved by the councils of ministers of Union Republics, and the ministries and departments responsible for educational establishments, in conjunction with GOSPLAN.

40. National economic councils, agricultural organs, ministries and departments submit advance lists to colleges, showing the undertakings at which young professional workers will be employed, detailing the name of the factory or collective farm or state farm, the particular post, the wages and the possibility of providing housing. On the basis of approved plans and returns, the colleges then allot graduates to particular posts. Job descriptions are available to students to aid them in their selection.

41. Young professional workers sent to another district are paid the cost of the journey for themselves and any family members, removal costs, a travel allowance, and an installation allowance of half-a-month's wages, and for each family member accompanying them a quarter of one month's wages.

C. Recruitment Through Public Appeals

42. The role of the mass organisations in the reallocation of manpower resources is growing. Thus, on the initiative of Comsomol[1], a new kind of recruitment measure has emerged the public appeal. Young people are urged to volunteer to participate in the construction of important undertakings and other projects in the North, the Urals, Siberia, the Far East, Kazakhstan and the Don Valley.

43. Following these appeals, there is recruitment of people (mainly young people) employed in industry or graduating from schools or colleges or demobilised from the armed forces or rendered redundant in industrial or office jobs by higher productivity as increased efficiency. Persons wishing to go and work in undertakings or on construction sites under the "public appeal" scheme are recruited by special city and district boards composed of representatives of Government, Party and Communist Youth organs.

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[1] Union of Communist Youth.

PART THREE: CONCLUSIONS OF THE INTER-REGIONAL STUDY TOUR

The Inter-Regional Study Tour on manpower assessment and planning in the U.S.S.R. terminated with sessions held at the I.L.O. headquarters office in Geneva. This period was devoted primarily to discussion by the participants of principles of manpower assessment and planning and to description of the organisation of programmes in their own countries with a view to drawing some general conclusions. The participants recognised: (i) that the comprehensive and complex programme in the U.S.S.R. had evolved over a period of 40 years while programmes in their own countries were of more recent origin or in some cases only in the stage of initial discussions, and (ii) that the social and economic situations influencing such programmes vary widely from country to country. Each participant spoke of those features of the U.S.S.R. programme he had found significant. As a group, the participants drew the following main conclusions regarding principles considered essential to a sound system of manpower assessment and planning.

- underlying acceptance of manpower resources as the real wealth of the country;
- formulation in clear but broad terms by the highest national authority, of the country's short and long-term social and economic policies and objectives with emphasis on its employment objectives;
- complete integration of manpower planning with financial and economic planning at all administrative levels and in all branches of economic activity;
- maintenance of a comprehensive standard statistical programme in support of such planning;
- shaping of vocational training and educational programmes to meet the needs of the industries and groups of economic activities they must serve;
- continued research into methods of manpower planning; recruitment of specialised staff for this purpose; and continued training of planners at all levels;
- recognition of the financial implications of a manpower assessment and planning programme and acceptance of the fact that the expenditures required are well justified.

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Appendix I

Participants in the Inter-Regional Study Tour on Manpower Assessment and Planning in the U.S.S.R.

SEDIQUE AMIR, Abdullah - Director of Manpower, Ministry of Planning, Kabul, AFGHANISTAN.

CESPEDES GUTIERREZ, Marcelo - Director-General, Social Security, Ministry of Labour and Social Security, La Paz, BOLIVIA.

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GORING, S.A. - Economist, Planning Division, Ministry of Development and Planning, Georgetown, BRITISH GUIANA.

JAINARAIN, I. - Economist, Central Planning Division, Ministry of Development and Planning, Georgetown, BRITISH GUIANA.

U THEIN MAUNG - Assistant Director of Labour, Rangoon, BURMA.

SIRIWARDENE, P.H. - Director, Office of National Planning, Colombo, CEYLON.

MERCIER, Braulio - Director, Manpower Directorate, Ministry of Labour, Havana, CUBA.

DELGADO, Natanael - Chief of Secretariat, Manpower Directorate, Ministry of Labour, Havana, CUBA.

GABROU, Dawit - Assistant Minister, Ministry of National Community Development, Addis Ababa, ETHIOPIA.

DJANG, R.K.O. - Senior Assistant Secretary, Office of the Planning Commission, Accra, GHANA.

JONES, S.B. - Assistant Secretary, Office of the Planning Commission, Accra, GHANA.

BUTANI, K.N. - Joint Director, Institute of Applied Manpower Research, New Delhi, INDIA.

TILAK, V.R.K. - Deputy Director of Employment Exchanges, Directorate General of Employment and Training, New Delhi, INDIA.

TATANG Mahmud - Assistant to the Head of the Directorate of Manpower, Department of Labour, Djakarta, INDONESIA.

SEPEHR, Jafar - Assistant to the Employment Service General Director, Ministry of Labour, Teheran, IRAN.

NOMIYAMA, Masayuki - Member, Policy Making Unit, Unemployment Countermeasures Division, Employment Security Bureau, Tokyo, JAPAN.

GARCIA VALENCIA, Antonio - Director of Labour Institute, Ministry of Labour and Social Security, MEXICO.

AHIMIE, P.C. - Deputy Secretary, National Manpower Board, Lagos, NIGERIA.

HALIM, M.A. - Commissioner of Labour, Ministry of Information and Labour, Khartoum, SUDAN.

MWAIPYANA, A. - Assistant Manpower Planning Officer, Ministry of Development Planning, Dar es Salaam, TANGANYIKA.

SHEHATA, A.M. - Director-General, Manpower Department, Ministry of Labour, Cairo, UNITED ARAB REPUBLIC.

MOUSTAPHA, M.N. - Director-General, Cairo Labour Zone, Ministry of Labour, UNITED ARAB REPUBLIC.

Appendix II

Technical Programme

Sept. 9 Opening of the Study Tour, Moscow

Mr. J. V. Goroshkin, Vice Chairman, State Labour and Wages Committee.
Mr. Deribin, Deputy Mayor of Moscow.
Mr. H. Davenport, Director of the Study Tour.
Mr. I.V. Sadtchikov, Director, I.L.O. Branch Office, Moscow.

Lecture and Discussion:

Organisation of State Planning of the Economy of the U.S.S.R. (USSR/MAP/6)[1]

B.I. Braginskiy, Doctor of Economics: Chief of Section, Economic Science and Research Institute, State Planning Committee, U.S.S.R.

Sept. 10 Lecture and Discussion:

Essential Features of the Organisation of Manpower Planning in the U.S.S.R. (USSR/MAP/8)

A.E. Grigoryev, Doctor of Science, Chair of Labour Economics, Plekhanov Institute of National Economy, Moscow.

Lecture and Discussion:

Calculation of Manpower Resources in U.S.S.R. (USSR/MAP/11)

A.F. Ulyanova, Chief, Labour and Wages Department, Central Statistical Authority, U.S.S.R.

Sept. 11 Lecture and Discussion:

Methods of Ensuring Full and Rational Employment in the U.S.S.R. (USSR/MAP/5)

M.Y. Sonin, Doctor of Economics, Senior Member, Institute of Economics, Academy of Sciences, U.S.S.R.

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[1] Code "U.S.S.R./MAP" refers to the English translation of lecture notes prepared by the speaker.

Lecture and Discussion:

Rational Allocation and Utilisation of Manpower Resources (USSR/MAP/9)

N.I. Shishkin, Doctor of Geography, Head of Labour Resources Department of the Labour Research Institute.

Sept. 12 Lecture and Discussion:

Planning Rational Manpower Utilisation and Methods Used in Compiling (USSR/MAP/10)

P.P. Litvjakov, Master of Economics, Head of the Economic Research Institute, State Planning Committee, U.S.S.R.

Effect of Technical Progress on the Structure, Occupational Composition and Levels of Skill of the Work Force in the U.S.S.R. (USSR/MAP/7)

V.B. Belkin, Master of Science, Head of Research Unit on Professional Training, State Committee for Vocational Training and Technical Education.

Visit: Moscow University

Sept. 13 Lecture and Discussion:

Population Forecasting in the U.S.S.R. (USSR/MAP/13)

A.M. Vostrikova, Chief, Population and Health Statistics Division, Central Statistical Authority of the U.S.S.R.

Lecture and Discussion:

Planning and Practice in Organised Recruitment, Resettlement and Placement of Young Persons Completing Studies at General Schools and Vocational and Technical Schools (USSR/MAP/3)

B. Eidinov, Chief, Planning and Records Section, Central Office for Organised Recruitment and Resettlement, under Council of Ministers of the Russia S.F.S.R.

Review Session:

Sept. 14 Lecture and Discussion:

Methods Used in Planning the Manpower Strength and Composition of an Undertaking (USSR/MAP/4)

L.A. Kostin, Master of Economics, Vice-Rector of the Moscow Advanced Correspondence School for Professional Training.

Visit: State Ball-Boaring Plant No. 1.

Sept. 16 TASHKENT

Lecture and Discussion:

Industrialisation of Soviet Uzbekistan and Modification of its Employment Structure (USSR/MAP/12)

S.K. Zijadullaev, Master of Science, Correspondent Member of Academy of Construction and Architecture, Chairman of State Planning Committee, Uzbek S.S.R.

Visit: Technical Institute of Special Training.

Sept. 17 Lecture and Discussion:

Methods of Forecasting Manpower Growth and Experience Gained in this Field in the Uzbek S.S.R. (USSR/MAP/2)

V.D. Zaitsev, Master of Economic Science, Head of the Labour Section, Institute of Economics, Academy of Sciences of Uzbek S.S.R.

Visit: Textile factory.

Sept. 18 Lecture and Discussion:

Methods of Planning Short and Long-Term Requirements and Sources of Supply of Manpower for the People's Economy of the Uzbek S.S.R. (USSR/MAP/15)

I.I. Iskakov, Principal Specialist, State Planning Committee of the Uzbek S.S.R.

Visit: Uzbek State Planning Commission.

Sept. 19 Lecture and Discussion:

Methods of Providing Manpower for the "New Areas" in Uzbekistan (USSR/MAP/16)

J.I. Ismailjhodzhaev, Head of the Department of Organised Recruitment and Resettlement, Uzbek S.S.R.

Visit: Collective farm (KOIKHOS)

Sept. 20 Visit: Agricultural machinery plant (TASHSELMACH).

Sept. 21 Visit: Professional training school specialised in training personnel for work in communications and cinema production.

Sept. 23 Visit: Special secondary technical school.

Sept. 24 Visit: State farm (SOVNOS) cotton growing.

Sept. 26 MOSCOW

Lecture and Discussion:

Planning the Training and Distribution of Professional Workers in the U.S.S.R. (USSR/MAP/17)

M.J. Chistijakov, Master of Economics, Chief, Education and Culture Department, State Planning Committee of the U.S.S.R.

Sept. 27 Lecture and Discussion:

The Role of Labour Law in Manpower Procurement According to State Plans (USSR/MAP/18)

A.V. Pitakov, Master of Laws, Deputy Head Legal Department, State Committee for Labour and Wages. U.S.S.R.

Special Lecture and Discussion: "Labour Balance Sheets" by Mr. Markus A. Yampolski - Chief Expert on Labour and Wages, Gosplan U.S.S.R.

Final Session: meeting with Mr. A.P. Volkov, Chairman State Labour and Wages Committee.

October 1-4 GENEVA

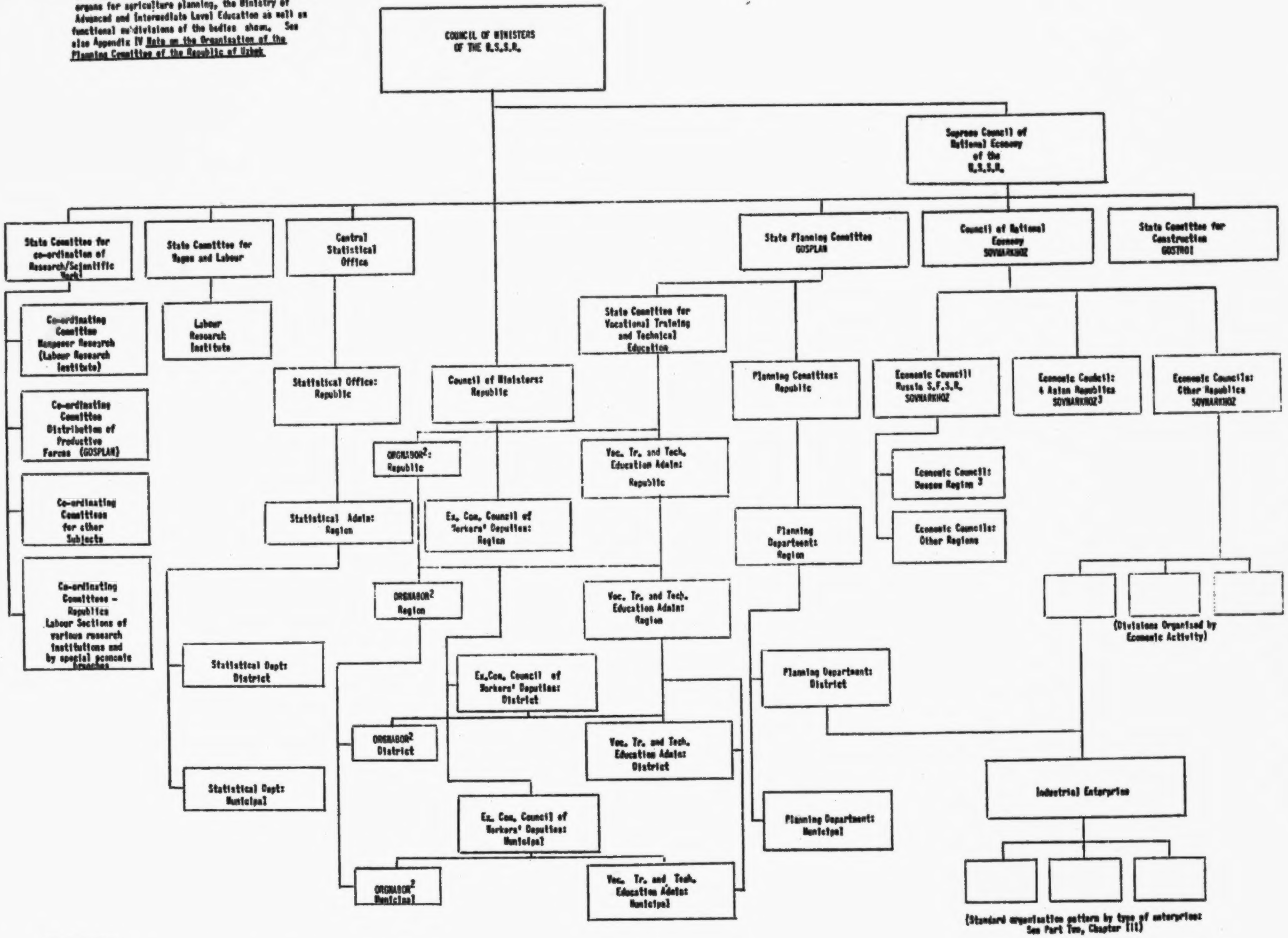
Reports by participants on manpower assessment and planning in their countries: problems and difficulties encountered and a review of the U.S.S.R. system in relation to these problems.

Review of General Principles and Conclusions.

THE MANPOWER ASSESSMENT AND PLANNING PROCESS IN THE U.S.S.R.

A Partial Diagram of Organisational Relationships

NOTE: This diagram does not give the complete organisational structure. Among the omissions are the State Bank, organs for agriculture planning, the Ministry of Advanced and Intermediate Level Education as well as functional subdivisions of the bodies shown. See also Appendix IV *Note on the Organisation of the Planning Committee of the Republic of Uzbek*.


COUNCIL OF MINISTERS OF THE U.S.S.R.
Supreme Council of National Economy of the U.S.S.R.
State Committee for co-ordination of Research/Scientific Work1
State Committee for Wages and Labour
Central Statistical Office
State Planning Committee GOSPLAN
Council of National Economy SOVNARKHOZ
State Committee for Construction GOSTROI
Co-ordinating Committee Manpower Research (Labour Research Institute)
Co-ordinating Committee Distribution of Productive Forces (GOSPLAN)
Co-ordinating Committees for other Subjects
Co-ordinating Committees – Republics Labour Sections of various research institutions and by special economic branches
Labour Research Institute
Statistical Office: Republic
Statistical Admin: Region
Statistical Dept: District
Statistical Dept: Municipal
Council of Ministers: Republic
ORGNABOR2: Republic
Ex. Com. Council of Workers' Deputies: Region
ORGNABOR2 Region
Ex.Com. Council of Workers' Deputies: District
ORGNABOR2 District
Ex. Com. Council of Workers' Deputies: Municipal
ORGNABOR2 Municipal
State Committee for Vocational Training and Technical Education
Voc. Tr. and Tech. Education Admin: Republic
Voc. Tr. and Tech. Education Admin: Region
Voc. Tr. and Tech. Education Admin: District
Voc. Tr. and Tech. Education Admin: Municipal
Planning Committee: Republic
Planning Department: Region
Planning Department: District
Planning Department: Municipal
Economic Council: Russia S.F.S.R. SOVNARKHOZ
Economic Council: 4 Asian Republics SOVNARKHOZ3
Economic Councils: Other Republics SOVNARKHOZ
Economic Councils: Moscow Region 3
Economic Councils: Other Regions
(Divisions Organised by Economic Activity)
Industrial Enterprise
(Standard organisation pattern by type of enterprise: See Part Two, Chapter III)

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[1] Reports to Supreme Council of National Economy of the U.S.S.R., *Economic Gazette*, No. 1, 4 January 1964.

[2] ORGNABOR – Administration for organised recruitment and resettlement of workers.

[3] With subdivisions organised by economic activity.

Appendix IV

Note on the Organisation of the Planning Committee of the Uzbek Republic

The Republic of Uzbek includes eight regions (not to be confused with "economic regions") and one autonomous republic; there are 33 townships with independent local governments and 66 districts. Each region has a planning committee and each district and township has a planning department which reports to the Planning Committee of the Republic.

The Executive Board of the Planning Committee consists of a Chairman, five Deputy Chairmen and seven members. The Chairman is nominated by decree of the Supreme Soviet of Uzbek Republic. The Deputy Chairmen are also nominated by decree and hold ministerial rank. Members of the Board are chiefs of departments of the Planning Committee and are nominated by executive decision of the Council of Ministers of the Republic.

The Planning Committee which has a staff of over 300 is organised into 33 departments. Some of the departments are listed below, along with an indication of some of their functions:

- Department of the Integrated Plan: concerned with the integration of the plans developed for the various branches of economic activity into the over-all plan which is submitted to the State Planning Committee;

- Department for Territorial Planning: concerned with the distribution of material production by geographic area;

- Department of Labour Productivity and Labour Force;

- Department of Finance Planning and Production Costs: with a subdivision concerned with setting production cost standards;

- Department of Capital Investment: with a subdivision concerned with construction work;

- Department of Technological Research: concerned with the planning of research activities and the introduction of new technology and machinery for production;

- Department of Balance Sheets for Raw and Other Materials: concerned with the calculation of materials required for the fulfilment of plans;

- Department of Equipment and Cables: concerned with estimating requirements for equipment;
- Department for the Development of Industries: with divisions for chemical industries, heavy engineering and electrical equipment, agricultural machinery development, power resources and electrification, transport and communications, food industries, fuel industries, building materials for construction, textile and light industries, municipal construction, geological and mineral resources prospection, ferrous and non-ferrous metals, trade turnover and consumption of goods produced;
- Department for the Manufacture of Cultural and Consumer Goods and Home Fixtures;
- Department of Agricultural Planning: including cotton growing, livestock raising, mechanisation of agriculture, electrification of agriculture and capital construction in agriculture;
- Department for the Development of Water Resource: hydro-electric construction;
- Department for the Procurement of Agricultural Produce: concerned with the per cent. of production to be purchased from the state and collective farms;
- Department of Education and Culture with two subdivisions: secondary and higher education and the distribution of specialists; and general education and culture;
- Department for the Development of Medical Institutions;
- Administrative Department.

Appendix V

Oblast Code	Subordination Code	Branch Code	Establishment Code	Code

Addressee ______________________________

(Name and Address)

Establishment (Organisation) ______________________

Trust, Combine, Administration ______________________

Sovnarkhoz, Ministry (Department) ______________________

Address of Establishment (Organisation) ______________________

STATISTICAL REPORT Form No. 2-T

Approved by C.S.O.[1], U.S.S.R., 7.10.1960, No. 619

Mail – Monthly

Forwarded the 7th day after the end of the report period to the:

1. Statistical administration (establishments of sovnarkhozy located in the territory of another oblast[2], send a report also to the statistical administration at the sovnarkhoz's location);
2. Statistical inspector;
3. Superior organisation.

INDUSTRIAL ESTABLISHMENT REPORT ON LABOUR PLAN FULFILMENT

FOR ______________ 19__

(Month)

I. NUMBER AND WAGE FUND OF PERSONNEL

Personnel Category	Line No.	Code	PLAN				ACTUAL		
			For year	For period since beginning of year	For report quarter	For report month	For report month	Since beginning of last year	For corresponding period since beginning of last year
A	B	C	1	2	3	4	5	6	7
A. AVERAGE REGISTERED NUMBER OF PERSONNEL									
All establishment personnel (lines 2-4)	1								
Industrial-production personnel – total	2								
of which, wage workers	3								
Personnel employed in non-industrial organisations (transport, housing, communal, kindergartens, capital repair of plant and installation,									

Personnel employed in non-industrial organisations (transport, housing, communal, kindergartens, capital repair of plant and installation, etc.)	4								
B. WAGE FUND (in roubles)									
All establishment personnel (lines 6-11)	5								
Industrial-production personnel - total	6								
of which: (a) wage workers	7								
(b) students from 9-11th class of secondary schools taking production training	3								
(c) students from technical and professional schools doing production practice work	9								
Wage Fund of industrial production personnel minus wages of students given on lines 8 and 9	10								
Personnel employed in non-industrial organisations (transport, housing, communal, kindergarten, capital repair of plant and installation, etc.)	11								
In addition, wages paid to non-registered staff personnel (in roubles)	12								

Gross value of output produced per one working person (in wholesale establishment prices of 1 July 1955) during the report month:

13. According to the plan ________ roubles
14. Actual____________________ roubles

Supplementary Information

1. The part of the total Wage Fund for the reporting period representing bonuses paid to managers for the preceding reporting period (to be filled in only for the months of January, April, July and October).

2. Report from the beginning of the year the sum paid as bonuses to industrial and production personnel for work concerning inventions, development and application of new techniques (to be filled in only for the months of March, June, September and December)

[1] Central Statistical Organisation

[2] Administrative Region

11. NUMBER AND WAGE FUND OF INDUSTRIAL-PRODUCTION PERSONNEL BY CATEGORY AND OF PERSONNEL OF NON-INDUSTRIAL ORGANISATIONS OF THE ESTABLISHMENT, FOR THE QUARTER

Personnel category	Line No.	Code	Average Registered number of personnel (actual)		Actual wages paid (in roubles)		
			In the report quarter	In the corresponding quarter of last year	Code	In the report quarter	In the corresponding quarter of last year
A	B	C	1	2	D	3	4
All establishment personnel (lines 16-25)	15						
Industrial-production personnel - total	16						
Including: wage workers	17						
apprentices	18						
engineering-technical personnel	19						
salaried employees	20						
minor service personnel	21						
military guard, armed watchmen, watchmen, and professional fire guard	22						
students from 9-11th class of secondary schools taking production training and students from technical and professional schools doing production practice work	23						
Wage Fund of industrial and production personnel minus wages of students listed on line 23	24						
Personnel employed in non-industrial organisations - total	25						
Including: Transport	26						
Housing and communal economy	27						
Subsidiary agricultural establishments	28						
Procurement of agricultural products	29						
Capital repair of plant and installation	30						
Kindergartens	31						
In the other non-industrial organs	32*						

Industrial-production personnel - total	16						
Including: wage workers	17						
apprentices	18						
engineering-technical personnel	19						
salaried employees	20						
minor service personnel	21						
military guard, armed watchmen, watchmen, and professional fire guard	22						
students from 9-11th class of secondary schools taking production training and students from technical and professional schools doing production practice work	23						
Wage Fund of industrial and production personnel minus wages of students listed on line 23	24						
Personnel employed in non-industrial organisations - total	25						
Including: Transport	26						
Housing and communal economy	27						
Subsidiary agricultural establishments	28						
Procurement of agricultural products	29						
Capital repair of plant and installation	30						
Kindergartens	31						
In the other non-industrial organs	32*						
____________ (indicate type of activity)	33*						
____________ (indicate type of activity)	34*						
In addition, wages paid to nonregistered staff personnel	35						

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* For codes 32 - 34 show data for organisations and units other than those indicated in codes 26 - 31; for logging industry units show data for rafting personnel in code 33.

Appendix V (contd..)

III. NUMBER, ACCESSIONS, AND SEPARATIONS OF INDUSTRIAL PRODUCTION WAGE WORKERS IN REPORT QUARTER

	Line No.	Code	Number
Accessions to establishment - total (sum of lines 37 - 41)	36.		
Students from high school and specialised secondary schools for production work	37.		
From organised recruitment	38.		
Graduates of factory-plant, technical and professional schools	39.		
Transfers from other establishments, construction projects, and organisations	40.		
Own hires by the establishment	41.		
Separations from the establishment - total (sum of lines 43 - 47)	42.		
Transfer to other establishments, construction projects, and organisations	43.		
End of contract and work period	44.		
Transfers to school studies, drafted into Soviet army, transfers to pension status, and other reasons prescribed by law	45.		
Voluntary quits	46.		
Dismissals because of absences without reason and other infractions of labour discipline	47.		
Registered number of wage workers at the end of the report quarter	48.		
Number of students from high schools and specialised secondary institutions who have worked on production or served a training period in production	49.		
Number of wage workers who have perpetrated absences without reason in the report quarter	50.		

IV. TIME UTILISATION OF INDUSTRIAL PRODUCTION WAGE WORKERS IN REPORT QUARTER

Indices	Line No.	Code	Number

Registered number of wage workers at the end of the report quarter	
Number of students from high schools and specialised secondary institutions who have worked on production or served a training period in production	49.
Number of wage workers who have perpetrated absences without reason in the report quarter	50.

IV. TIME UTILISATION OF INDUSTRIAL PRODUCTION WAGE WORKERS IN REPORT QUARTER

Indices	Line No.	Code	Number
A	B	C	1
Man-days worked by wage workers	51.		
Number of man-days of full-day off-standard time	52.		
Number of man-days of work absences:			
Regular leave	53.		
Maternity leave	54.		
Illness	55.		
Other legally authorised absences	56.		
Administrative leave	57.		
Absent without reason	58.		
Holidays and days off	59.		
Total man-days present for and absent from work (sum of lines 51 - 59) ..	60.		
From the number of man-days for holiday rest the number of supplementary rest man-days given workers having a five-day work week and the man-days given those having non-interrupted production work in excess of the fixed hours of work	61.		
Number of man-hours worked - total	62.		
Of which, man-hours of overtime worked	63.		
Number of man-hours of intrashift idleness	64.		

, 196

Director (Manager)

Chief Accountant

APPENDIX VI

OUTPUT FULFILMENT REPORT

Oblast code	Subordination code	Branch code	Establishment code	Code

Addressee
(Name and address)

Name of establishment

Sovnarkhoz, Ministry (Department)

Address of Establishment

STATISTICAL REPORT Form No. 4-T (Industry)
Approved by TsSU U.S.S.R., October 7, 1960, No. 619
Mail — twice a year.
Submitted by industrial establishments for the months of March and October, correspondingly, on 10 of each reporting period.

1. Statistical administration (establishments of sovnarkhozy located in the territory of another oblast[1], sent a report also to the statistical administration at the sovnarkhoz's location);
2. Superior organization.

INDUSTRIAL ESTABLISHMENT REPORT ON OUTPUT-NORM FULFILMENT AND WAGE FUND COMPOSITION

(For (month) , 19 .

Total number of industrial production wage workers (piece-rate and time-rate), at the end of the report months persons.

I. FULFILMENT OF ESTABLISHED OUTPUT NORMS BY PIECE-RATE WAGE WORKERS

A	Line no.	Distribution of piece-rate wage workers by degree of output-norm fulfilment							Average percentage of output-norm fulfilment
		Up to 90%	From 90 up to 100%	From 100 up to 110%	From 110 up to 120%	From 120 up to 150%	From 150 and higher	Total (sum of cols. 1-6)	
	B	1	2	3	4	5	6	7	8
Wage workers of basic shops	01								
Wage workers of auxiliary shops	02								
Establishment total	03								
including	04								
	05								
	06								
	07								
	08								
	09								
	10								
	11								
	12								
	13								
	14								
	15								

Instruction for Completion of Part I

Coal mining enterprises do not make entries on lines 01 and 02 but enter on lines 04-12 information for the following categories of workers:

Underground mines: lines 04 – total workers on extraction of coal; line 05, workers on cleaning operations; line 06, workers on preparatory operations; line 07, other underground workers; line 08, surface workers.

Open pit mines: line 09, total workers on extraction of coal; line 10, production workers; line 11, workers on preparatory operations; line 12, other workbrs.

Logging undertakings list specifically: line 04, electric and gasoline saw mechanics; line 05, wood cutters; line 06, tractor and winch operators; line 07, log haulers, machine drawn; line 08, log haulers, horse drawn; line 09, locomotive drivers; line 10, wagon drivers; line 11, elevator operators; line 12, hand loaders; line 13, repair mechanics; line 14, group workers; line 15, tractor and winch operators in group.

Enterprises in other branches of economy activity enter on line 04-15 information concerning the main individcal occupations according to instructions from their superior organization.

II. NUMBER AND CHARACTERISTICS OF OUTPUT NORMS IN EFFECT AT THE ESTABLISHMENT

(Completed twice a year – as of 1 May and 1 November)

A	Line No.	All output norms in effect at the end of the report month	Of which,		Number of norms revised upwards since the beginning of the report year
			Technically based	Experience statistical	
		1	2	3	4
Basic shops	16				
Auxiliary shops	17				
Establishment total	18				

III. COMPOSITION OF WAGE FUND, OF INDUSTRIAL PRODUCTION WAGE WORKERS (IN APRIL)

Sum (thous. roubles)

19. Payments for basic piece-rate valuation, according to straight piece-rate system .
20. Payments for basic-rate valuation according to premium per piece ....
21. Payments for basic piece-rate valuation, according to progressive piece-rate system ....
22. Bonuses to piece-rate workers, according to progressive valuation ....
23. Premiums to piece-rate workers ....
24. Time payments, according to tariff rate (salary) ....
25. Premiums to time-rate workers ....
26. Supplement, according to regional coefficient ....
27. Bonuses to piece-rate workers, in connection with change of work conditions ....

Sum (thous. roubles)

28. Bonuses for overtime work ....
29. Value of communal services (provided without cost) and of payments in kind ....
30. Payments for regular leave ....
31. Seniority payments ....
32. Bonuses for night work ....
33. Payments for work interruptions of nursing mothers ....
34. Payments to youths to compensate for a shorter working day .....
35. Other types of wages ....
36. Total monthly wage fund (sum of lines 19-34) ....

IV. COMPOSITION OF WAGE FUND, OF ENGINEERS, TECHNICAL PERSONNEL AND RELATED STAFF (IN APRIL)

Sum (thous. roubles)

37. Basic salary ....
38. Premiums ....
39. Supplement, according to regional coefficient ....
40. Longevity pay ....
41. Other payments (including additional piece-rate earnings)..................
42. Total monthly wage fund (sum, lines 37-41) ....

Director (Manager)

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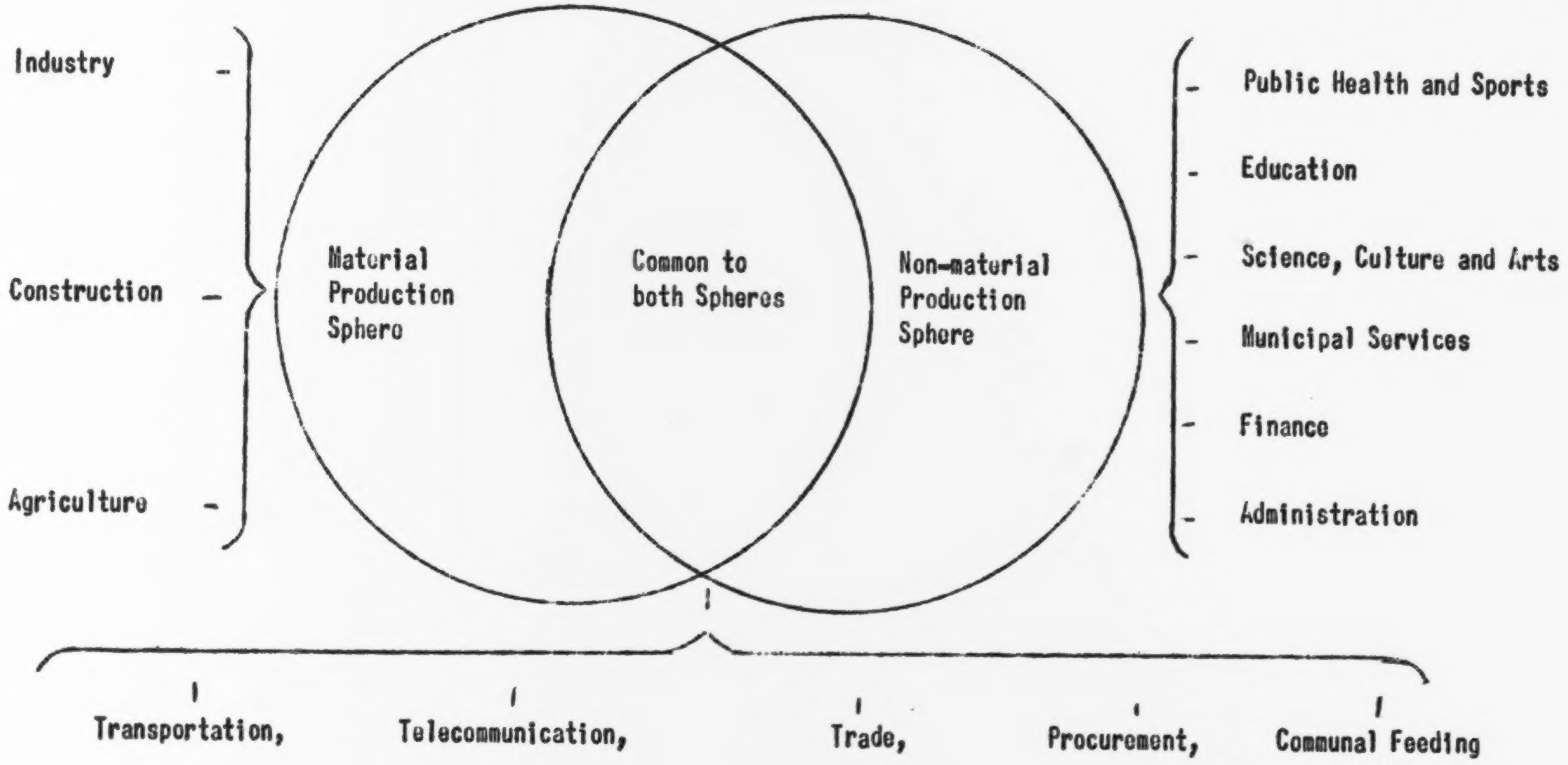
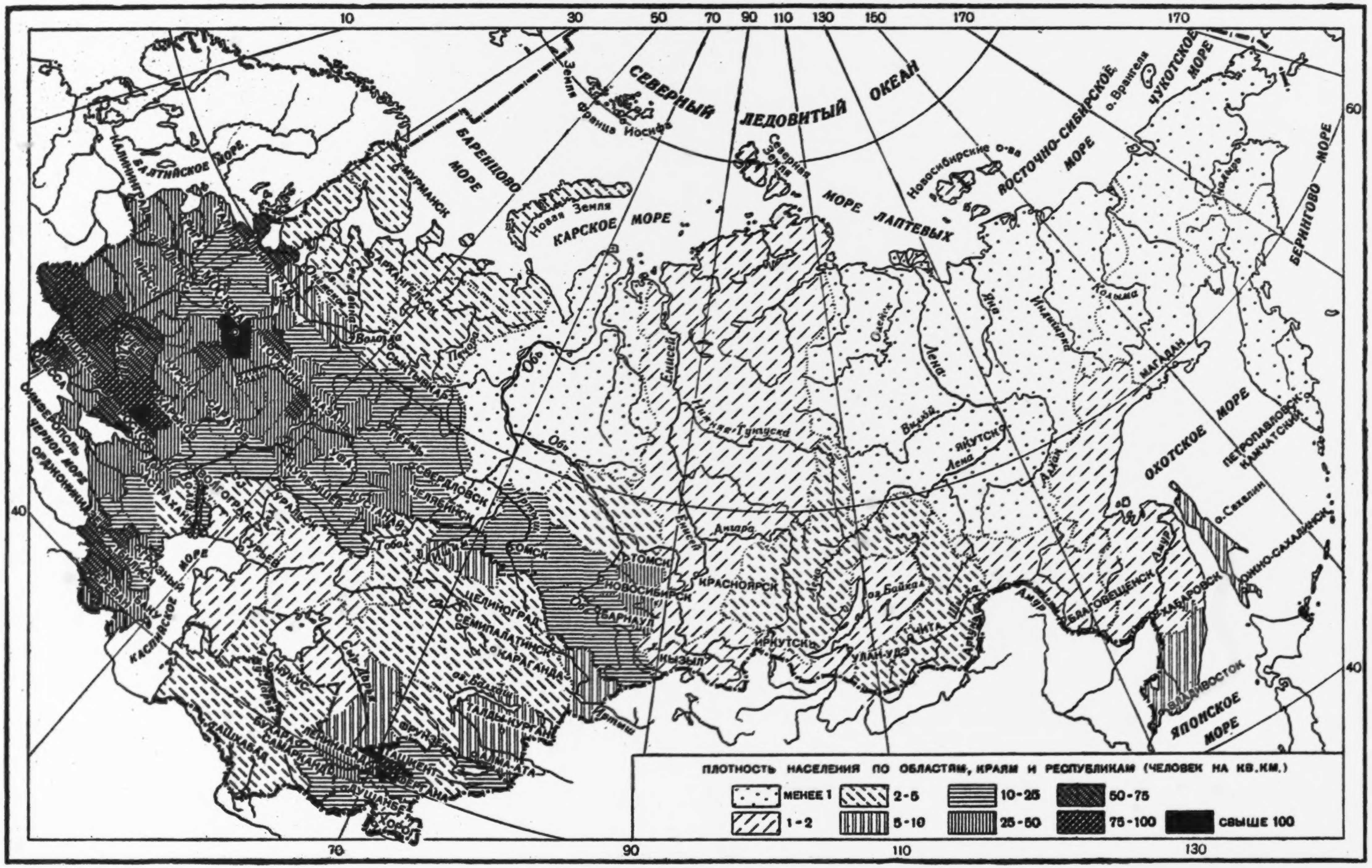
[1] Administrative region.

Organisation of Manpower Planning by Spheres of Production and Branches of Economic Activity

Appendix VII

Distribution of Manpower Engaged in Social Production in the U.S.S.R.


Industry
Construction
Agriculture
Material Production Sphere
Common to both Spheres
Non-material Production Sphere
Public Health and Sports
Education
Science, Culture and Arts
Municipal Services
Finance
Administration
Transportation,
Telecommunication,
Trade,
Procurement,
Communal Feeding


СЕВЕРНЫЙ ЛЕДОВИТЫЙ ОКЕАН
БАРЕНЦОВО МОРЕ
КАРСКОЕ МОРЕ
МОРЕ ЛАПТЕВЫХ
ВОСТОЧНО-СИБИРСКОЕ МОРЕ
ЧУКОТСКОЕ МОРЕ
БЕРИНГОВО МОРЕ
ОХОТСКОЕ МОРЕ
ЯПОНСКОЕ МОРЕ
БАЛТИЙСКОЕ МОРЕ
ЧЕРНОЕ МОРЕ
КАСПИЙСКОЕ МОРЕ
Земля Франца Иосифа
Новая Земля
Северная Земля
Новосибирские о-ва
о. Врангеля
о. Сахалин
МУРМАНСК
АРХАНГЕЛЬСК
СЫКТЫВКАР
ПЕРМЬ
СВЕРДЛОВСК
ЧЕЛЯБИНСК
КУЙБЫШЕВ
ВОЛГОГРАД
АСТРАХАНЬ
ГУРЬЕВ
КАЛИНИНГРАД
СИМФЕРОПОЛЬ
ОРДЖОНИКИДЗЕ
БАКУ
ОМСК
ТОМСК
НОВОСИБИРСК
БАРНАУЛ
КЫЗЫЛ
КРАСНОЯРСК
ИРКУТСК
УЛАН-УДЭ
ЧИТА
ЯКУТСК
МАГАДАН
ПЕТРОПАВЛОВСК-КАМЧАТСКИЙ
ЮЖНО-САХАЛИНСК
БЛАГОВЕЩЕНСК
ХАБАРОВСК
ВЛАДИВОСТОК
ЦЕЛИНОГРАД
СЕМИПАЛАТИНСК
КАРАГАНДА
ТАЛДЫ-КУРГАН
АЛМА-АТА
ФРУНЗЕ
ТАШКЕНТ
САМАРКАНД
БУХАРА
АШХАБАД
ДУШАНБЕ
НУКУС
Обь
Енисей
Нижняя Тунгуска
Ангара
Лена
Вилюй
Оленёк
Яна
Индигирка
Колыма
Амур
Печора
Волга
Урал
Тобол
Иртыш
Сыр-Дарья
оз. Байкал
оз. Балхаш
10
30
50
70
90
110
130
150
170
60
40
ПЛОТНОСТЬ НАСЕЛЕНИЯ ПО ОБЛАСТЯМ, КРАЯМ И РЕСПУБЛИКАМ (ЧЕЛОВЕК НА КВ.КМ.)
МЕНЕЕ 1
1-2
2-5
5-10
10-25
25-50
50-75
75-100
СВЫШЕ 100

U.S.S.R. - Density of Population per Square Kilometre
(1959 Census)